

saraiREADER 01

THE
PUBLIC
DOMAIN



*The paradox of visibility and isolation
that haunts so much of modern public
life originated in the right to silence in
public which took form in the last
century. Isolation in the midst of
visibility to others was a logical
consequence of insisting on one's right
to be mute when one ventured into
this chaotic yet still magnetic realm.*

Richard Sennett,
The Fall of Public Man

CHAOS

Bounded,
deterministic
dynamics
that
are
aperiodic
and
display
sensitive
dependence
to
initial
conditions

dak@sarai.net

Discussing the Public Domain



From: **shuddha@sarai.net**

To: dak@sarai.net

Subject: **The public in the Public Domain**

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I am interested in trying to stretch the meanings of the word 'Public' in the expression Public Domain to express something as hidden as it is ubiquitous. This may shade off into meanings that are the very opposite of what we commonly understand when we say 'Public'.

Remember the Hindi film song that said "... yeh public jo hai, sub jaanti hai" (this Public, it knows everything). This usage of the word makes the Public, which seems to be a presence, into an animate entity, a sentient being - a carrier of knowledge and a vector of information. The "it knows everything..." of the song, suggests that this body of knowledge includes things that are not necessarily apparent, or visible, or transparent. It means, the Public knows more things than are generally up for grabs in, let's say, the 'marketplace of the knowable'. It suggests codes and protocols of encryption that circulate in self-governing constellations of people, data and cultures. It evokes the idea of very public secrets, of whispers, rumours, prophecies, blandishments, fantasies and calls for insurrection that no one may be willing to speak out loud for fear of being caught (a very wise and necessary fear) but which, nevertheless, everyone is murmuring.

This means that the Public Domain may be the safest refuge for those ideas that are vulnerable because they are the most radical. The ones that need to be most obscure to the censor, and at the same time most understandable in common speech, because they are the closest to lived experience.

The desire to place cultural material - beginning with the software in, and between, our machines, and ending with the software in, and between, our minds - squarely in the Public Domain, means that we are creating a body of work without necessarily placing any value on the fact of who has created them, where each can contribute to his/her inclination and take according to his/her desire. The identities of the giver and receiver being fluid and in some senses meaningless in this transaction, suggests that the origins and points of transmission of messages can not be reliably verified, and are therefore difficult to police. The costume designs of identification and the disguises of anonymity are equally attractive forms of attire. In shifting between one and the other, between secrets and announcements, lies the enigmatic attraction of the adventure sport of surfing the Public Domain.



From: **ravis@sarai.net**

Subject: **Discussing the Public Domain**

The history of the public domain is not an easy one. In his classic text, *The Fall of Public Man*, Richard Sennett traces the first use of the 'public' to England in 1470, where it was a shorthand for the common 'good'. Similarly, 'le public' in 17th century France was a region of sociability and conversation. It seems to me that classical western notions of the 'public' as a space of conversation, solidarity and dialogue face a run into a theoretical conundrum. Most accounts (Habermas, etc.) trace a high point in the early modern period and map a period of secular decline from industrial capitalism in the 19th century. From the 19th century the distinction firmly drove the sphere of intimacy into the private sphere, and public conversation declined. Modern architecture, particularly the International Movement emptied 'public' space, making it a formal, dead space - witness Corbusier's plans for Algiers and Chandigarh.

In the Indian case the street (the market, the tea stall) was always a space for public conversation in most towns and cities. Colonialism attempted to formalise this conversation, by setting up norms of the 'public good'. The idea of the 'public good' is a deeply problematic one, all the more when we grapple with the contemporary. There is certain violence to the way in which the 'public good' has been retailed in the recent past in India's cities. Given the experience of the past few decades my personal sensibility would be to critique the entire discourse of the public good as it stands in India, where the term is increasingly moving towards a legal right to live, work and move in the city.

Is conversation possible in a future public domain? It seems to me that in the new media, there is conversation - among communities of free software coders, between sub-cultures of youth, hackers, sexual minorities. The important thing is that all this is happening in a medium that is ambivalent to space in the classic sense of the term. There is nothing 'Western' about this. Those cultural elites who have no problem in valourising print culture as a period of possibility would do good to take a stroll down the back alleys of their own neighbourhoods and see the social groups who are participating in the culture of new media. The vast majority of Indians access the new media outside their homes, diverging from the West.

Thinking about a future public domain must also lead us to question the classic and easy relationship between space and conversation, between intimacy and solidarity. There are no easy answers here, but the questions must begin.



From: **monica@sarai.net**

Subject: **What's this public?**

Is it possible to construct a homogenous 'public' outside of class, caste, gender, race? Can the 'public' be a resolved category?

What happens to these multiplicities in a singular concept?

For those who go from home to work, and commute long hours to come home again, public space is basically the interminable zone between work, and rest, in order to go back to

work again. And the park is usually for a short snatched siesta at lunch. Which is why they are locked and wetted at night.

For many women, entry into the public space is marked by idioms that work like umbrellas. They provide the required shadow in which they can experience the otherwise common sensation of being within a group of those who are familiar, not so familiar, or strangers.

One idiom that serves this purpose well is religion. My mother, for example, goes to *kirtan* every week. These are like *kitty kirtan* gatherings. Devotional songs, gossip, domestic knowledge, anxieties, and sometimes even wishes and desires are shared. Later, she returns home with *prasad* for the family. But like all the others, she has ensured that her time-out matches the not-at-home time of the other members of her family. In that sense, her public space is a temporal one.

Another idiom is the commodity. For a woman to spend time in the market, the alibi has to be that she needs to buy something, a definitive sanctioned purpose. My mother enjoys going to the local market and the weekly bazaars. She moves around these spaces with confidence and poise. She bargains, weighs, buys and exclaims. But when she returns, she has to describe the bazaar experience as 'tiring'.

To be able to loiter, 'without intent', in a strange space, without the protection or the burden of umbrellas, may be a desire that will require a more open rendition of the public.

Another strand entirely:

If the curfew is a censorship of public space,
Then IPC Section 144 is the Cinematograph Act of the public space,
And the Suppression of Immoral Traffic Act is a sub-clause.
But where, then, is the censor board of the public space?



From: **jeebesh@sarai.net**
Subject: **For a discussion on Public Domain**

A court judgement says, "The airways are public property". It is so because they have been created by public money. The job of the State is to manage and regulate the usage of this resource.

So, a specific definition around access, boundaries, permissibility, desirability, infringements, and sanctions has been marked and licenses will be promulgated. We can clearly see how a regulated and monitored space is being produced under the term 'public'.

Another term that emerges in the examination of such usage is the 'public sector', used interchangeably with 'government business undertakings'. Here the irreconcilable contradiction between labour and capital is hidden under the dominant meaning-constructs of 'public good' and 'public necessity'.

The term 'public order' is used insistently by the state to intervene and regulate in all kinds of issues, contests and conflicts. Here again the word is being used as a category that dissolves social antagonisms, contradictions, issues of power and access. Probably only 'public administrators' wholly understand the deep nuances of the term!

At one level the word 'public' is deeply imbricated within the state's presence in the

ordering, regulating, monitoring, and creating of spaces, social wealth and discourses. But at another level it is clearly evident that this same word also makes possible a laying of a larger claim, to resources and spaces that would otherwise remain inaccessible to many. People contest various forms of economic and social denial, expropriation, and repression by creatively working out differing definitions of 'public good', 'public lands', 'public interest', etc. This is what corporations, for example, find difficult to push out of their way, and will increasingly find it so because of multiplying contestations for the same resources. There is only so much land and water and air.

At this definitional level, it may be productive to engage with all the various definitions of the public that are being articulated through various contestations and negotiations. The crucial question, of course, is: from which vantage point is one to look at this contestation and which definition does one extend? I would think that an 'imaginary' of an 'ought to be', of a desirable social formation, perhaps exists, lingering somewhat as an under-articulated shadow.

I would prefer an imaginary which works out the politics and poetics of 'open and common' space, with un-regulated access. Imagination, creativity, fantasy and dreams would together produce, protect and multiply this fragile commons. The practice of the making of 'digital public databases', for example, or sharing music over the net, or developing software in a free and open way, seem to be asking for a challenging and inventive concept of the public. In that sense the term 'Public Domain' seems to me to have such a meaning, or at least to posit it, as it is a term not located in just the spatial.

But un-regulated access does not mean that one disregards various not-so-visible boundaries of this public domain. Since meanings are very mobile, they need to be continuously and creatively worked upon. Just like its earlier cousins, 'Public Domain' is also under pressure of being mutated into 'public space'!



From: **Saumya Gupta** <sgupta@sarai.net>
Subject: **Anybody/ Everybody**

Continuing with the above, one can think of the opportunity/handicap of effacement that people have in the urban domain, not so in a village. Isn't it a case of nobody knows anybody vs. everybody knows everybody? By definition, I think, the public domain wants me to identify myself before it engages with me. Which is not to say that you cannot be anonymous in the public domain. It has historically signified a kind of happy nameless, effaced existence. But that is only when you are thought of as collectivity, and you think, behave, demand as a collective public. The moment you want to avail of something individually, a public identity has to be posited. For something as simple as travel by train, you have to be somebody identifiable, authenticated, verified.

Is the public something people are part of, or is it something inside them? Can the notion of a public have fantasy connotations?

The question of identity within a public domain deeply engages me. I am many things, many personas, and for me to define myself as one of those leads me into the terrain of suppositions, assumptions and even fabrication. I am not comfortable with this but do it all

the time. The public domain then is a realm of fantasy identities that we assume as and when required. The multilayered-ness of self means that each of us is always/already made up of many 'virtual' selves. Which leads me to think - do I have to necessarily fabricate to be a part of a public? Any Public? Is the public domain just a notional entity?



From: **Awadhendra Sharan <sharan@sarai.net>**
Subject: **On the Public Domain**

It seems to be that the Public domain, as a domain of experience, is of at least three types: political public domain, cultural public domain and a more generalized sense of the public which is the object of Development and Nation-building, the population as public. In the first two modes, publics constitute themselves; they exercise choice and decide to be counted. The public as population, however, is acted upon, is subject to agendas set from above, albeit accompanied by the rhetoric of participation. For the population as public, protest is the only mode of expressing choice.

All forms of the 'public' inhabit both an idealized space and many mutable forms of existing ones. Universal access (of adults) and active participation in issues of general interest characterize the ideal political public. Universal access within cultural boundaries, however imagined, and a concern with intra-community issues characterize the ideal cultural public. Children, men and women are all constituents of this cultural public. Finally, the concern with equity, the *daridranarayan* as primary beneficiary marks the ideal stance of the population as public rhetoric.

Real publics, to be sure, differ widely from these idealized formulations. There are boundary keepers in all instances of the public, assuming such role through status, power or consent. These boundary keepers are also constantly challenged, the contest being most marked in instances where the State abrogates to itself the role of the watchdog, ensuring that only 'desirable' forms of public are constituted and others suppressed. The contest is not absent in the case of cultural publics either with the young, women and assetless asserting for recognition against the policing role assumed by the elder, male and propertied representatives of the community. These are indeed necessary contests if actually existing publics wish to strive towards idealized publics.

There is, however, another issue within the various forms of publics about which we have not worried enough. This concerns not the gap between the ideal and the real, but the form of the ideal itself, of articulating interests that are general, beyond immediate and parochial interests. The ideal signals to the possibility of ways in which we can think of collective interests, without prejudice, bias or calculations of personal benefit. It empowers each individual to assume responsibility for an abstract sense of the collective than that into which one has been born, to step beyond boundaries that are already drawn for us.

This ideal possibility of a universal way of becoming public is most marked in the political and the imaginations of the population as public. To a lesser extent, however, it is located within cultural public imaginary too.

I subscribe to this imagination. I believe that in a deeply inequalitarian society such as India, there is a need to aspire towards universality, to step outside one's ascribed status

and identities. But this assent to universality immediately poses problems for I simultaneously recognize that the universal has often been a cloak for disguising the parochial. That it has historically served as an excuse for civilisational violence. On a different register, I realize too that in many instances public articulation is the basis for constituting the personal. To offer a divide between the private and the public would therefore serve to rob us of this possibility.

I have no answers to this dilemma. Acting as a universal public, while recognizing one's situated-ness, seems to offer a way of negotiating with it. But this is possibly easier argued in theory than enacted in the public.



From: **ravikant@sarai.net**

Subject: **Public Domain - A few comments**

It is obvious in the discussion that public domains are historically constituted and reconstituted through a series of contestations. In the modern and our own times, the idea of Democracy has worked itself out through various public domains. What is also crucial is the issue of violence in determining the shape and nature of the public domain. Violence is often deployed, in South Asian situations at least, to articulate a political point. As an important weapon in the struggle for or against power, it creates a logic of its own, marginalising other forms/agencies of political actors. Since the predicament is doubly ironical in a country like India which has produced one of the most successful and non-violent mass movements, violence as a tool of political hegemony is worth thinking about.

Language is another, perhaps less dramatic, but equally significant entry point to the conundrum as to how public domains get constituted. And the case of India's so-called National Language - Hindi - is curious. It is simultaneously the language of power as well as struggle. On the one hand it is pitted against the might of English, the language of erstwhile colonial masters that is also the language of the elite in India. But it would be a gross simplification to suggest that Hindi is only the language of masses. Because it quickly picked up the tricks of power and became the language of command in Independent India, devouring the numerous rich dialects in the process of standardising and 'Sanskritising' itself. Official Hindi became increasingly wooden and remote from living culture. This parallel culture of the popular of course continues to thrive in the films, fiction, songs and poetry. But there is the perpetual anxiety: why has Hindi not been able to graduate to become the language of research and reflection? Is it doomed to go on servicing the traditional, although by all accounts very rich, literary domain?

After this sketchy backgrounder, one can perhaps respond to the issues of Digital Divide raised by Geert Lovink. Yes, it is an issue here. With the onset of digital communications the anxiety referred to above has acquired a new dimension. There is a sense of being left out, an urgency to catch up with breakneck speed with which technologies worldwide are updating themselves while the Hindi Virtual Public Domain struggles to develop such basic computational tools as Digital Dictionaries, Spell Checkers, and E-mail. This is one side of the story. On the other side is also the large majority that is paranoid of the New Media, coming as it does packaged in the larger ensemble of Globalisation and the atten-

dant structural adjustments and unbridled consumerism. The cultural shock of satellite TV is not yet over (the government is considering banning Fashion TV, on grounds of obscenity) and people are being bombarded with the mixed fare that is the World Wide Web. The tentative presence of Hindi on the Web is refreshing to the extent that the language here is more eclectic than officious and some innovations are taking place outside state tutelage, in the arena of small entrepreneurship and collective endeavours. Although, overwhelming NRI input is more in the nature of nostalgia rather than creativity and ways of seeing are not new at all. So, on the whole, digital technology is being received with apprehension and awe for the moment by the entrenched Hindi intelligentsia, the initial breakthroughs notwithstanding. The battle of languages to climb on to the triumphalist technological bandwagon and the sad story of the ones missing out and thereby getting relegated in the emergent public domain is interesting even as we try to make languages techno-friendly.



From: **Ravi Vasudevan <raviv@sarai.net>**
Subject: **Sarai Public Domain Discussion**

There is a debate in India about the quandaries contemporary culture and politics faces in dealing with frameworks for representation. This has to do with looking at categories and frameworks which have emerged from western political and cultural theory, and center on the status of civil society - classically defined as the domain of freely associating individuals who determine the structures of political and cultural action - in the circumstances of a post colonial society riven with economic, educational, cultural, and status inequalities and hierarchies. These divisions have often meant that everyone cannot freely associate, have a voice within civil institutions and lay claim to the resources of the state. The irony has been that when new, formerly subordinated groups enter the civil domain they may entirely infringe the protocols of representation, discussion and communication, often very violently. Let us say that there is an inevitable, and perhaps necessary destabilization of such protocols, before a new, more equitable consensus emerges to determine adequate changes. While this debate around the civil defines one form of the exceeding of the repressive functions of normative structures, where does this place the issue of public discourse?

My sense is that the public cannot, in terms of conceptual creativity, simply mirror this process of cultural and political representation, or alternative formulations such as political society. The creativity of public forms and the public domain can have a series of on the ground, everyday dimensions, where people work at the interstices of legality, build ties and networks, adjust with the powers that be in the administration and police, to form a necessarily unstable public - with drives to find employment, to gain knowledges and effect communication, to dissemble about one's identity, to develop access to spaces and facilities that may be formally proscribed or economically out of reach. This is not a *public* public, but a necessarily unofficial one, one that does not, indeed cannot, afford to advertise itself. Let us not even call it a counter-public, because, as Calhoun points out, it is not as if these practices are the ones desired by those compelled to deploy them, there may be a desire to be included, and become legitimate, within official protocols; but it is this public that courses through the everyday life of our society, and is crucial to the very possibilities of its being.

But there is another field, that of the imagination, that we need to think through. What I will say here is entirely exploratory, but it arises from a sense that individuals form into liminal public entities through an investment in a disaggregating media universe. Whether you listen to the pocket radio, the widely circulated musical cassette, go to the cinema, watch programmes or films on the TV, access the net, there is a special, individuated way in which you receive and internalize what you hear and see. You might be doing it as part of a group - a cinema audience, a family watching the TV or jhuggi dwellers sharing facilities - but, arguably, there is still something that exceeds group circumstances of address and viewing practice. I say this because it is widely assumed that Indian society functions differently, is motivated by collective and group forms of subjectivity, and such forms are instituted in the way frameworks of representation and modes of cultural address have developed. But consider that there is still an interiority at work, which the outside, the larger intersubjective frame cannot map itself onto; and there you have a serious problem for inquiry and practice. For, if at this personal level, images and sounds and information impact on me in ways different from the way others seem to respond, I should step back and think, this must be happening to them, too. And then I have to think, this is about memory and about desire, about fantasy, and, finally, it's about not wanting to be alone in these imaginings.

I'm not sure how we reach an understanding of this particular desire to connect an interiority to a public frame. Film and other types of cultural analysis have often tried to grapple with this, bringing a whole body of methods and sensitivities to the study of public cultural institutions, narratives, and formal peculiarities. Speaking as an academic, I would like to strengthen imaginative forms of research in ways which engage intellectual reflection in lively dialogue with the everyday practices that course through the public sensorium, to body forth the lineaments of shadowed desires, mundane hopes and yes, to confront our darkest selves.

> > From: "geert lovink" <geert@xs4all.nl>
 To: <dak@sarai.net>
 Subject: **Answer to Public Domain Questions**
 Date: Wed, 15 Nov 2000 19:13:46 +1100

~ How do we distinguish the 'Public Domain' from the 'Public(s)'? What is the role that the Public plays in the Public Domain?

Why distinguish? Why not start with the question of the design of the public realm/domain? Is it there? What's its history in India? Were the media by definition part of the public domain? What kind of public domain does Sarai have in mind? The Public is the Enemy, as the famous saying says. That's Dadaism. I don't believe in these huge terms. They can easily make one depressive. It's like with masses and classes. Huge amorphous categories. I think a bit more micro-politics wouldn't be bad here. Multitudes of groups, strategies, practices, ideas, debates, images. They altogether might create a temporary public media culture. One that always has to be renewed, questioned and pushed forward. Nothing is taken for granted in this fluid and dynamic sector.

~ *What is the relationship between the public domain/public sphere/public and the domain of the private?*

I still think we can make that distinction. The public sphere should not be blown up. I think it is even better to scale it down and really make it lively instead of colonizing and claiming everything public. For the US-Americans there is no privacy. Europeans still believe in that distinction. I am not sure about India. I certainly believe in the merit of the individual choice as something very precious (not as a special effect of consumerism). It does not just mean the right to be left alone.

~ *Does the Public Domain have a boundary? What is this boundary constituted by and when does it get manifested?*

The boundary in my view would be its humbleness to be intense, radical and different, without being expansionist. I think we can still make the distinction between the state, the market and the public. And between the public and the private. I think disassociating the public from the state is one of the most painful and utopian processes of this age. They are no longer equal. We cannot expect from the state to take care of all the public domain and its functions. To some extent, that's sad. The fight for public domains always has that slightly ambivalent, nostalgic character. It has past the point of merely demanding. It has to shape, design, act out. Yet, a lot of its work is related to conceptual policy making.

~ *Does the 'Public' nature of the Public Domain require that it have free and/or unmediated access, and freedom for anyone to enter, participate and express themselves in the domain?*

Yes, but we will not GET it for free, we will have to MAKE it free. Free as in free of sugar, not free of costs. Freedom is a right, not a cheap slogan to suck people into something. And it could come with a cost.

~ *Who decides the contours and the shape of the boundary of the public domain? It is not enough to say, those who are present in the domain decide?*

Obviously. We can do a power analysis and identify the players, but we should as well be courageous enough (and naive) to state that we are players ourselves. The trick is to position oneself inside the technology, inside the media, inside the public domain. The outsider's position is a boring one. Morally and politically correct but without any drive to intervene.

~ *Is the public something people are part of, or is it something inside them? Can the notion of a public have fantasy connotations?*

Without fantasy it is dead. Empty rules. Repetition without a soul.

"...The bazaar, the street, and the fair (*mela*), it seems to me, have for long formed a 'spatial complex' in India. Streets, for good or bad, all too often become 'bazaars' in India, and *melas* combine the different purposes of pilgrimage, recreation and economic exchanges. I take the bazaar as a space that serves the needs of transportation as well as those of entertainment and the buying and selling of goods and services. I am aware that there have been different kinds of bazaars in India, going by their different names of *hats*, *mandis*, *ganjes*, etc., and varying in their functional specializations. The bazaar I speak of is obviously an abstraction of certain structural characteristics that, to my mind, define the experience of the bazaar as a place. Everyday linguistic practices involve and permit such an abstraction - in Bengali language, for instance, the word *bajar* (bazaar) is often used in a metaphorical way to represent an 'outside' to *ghar-shangshar* (the way of the householder, i.e., domesticity); thus prostitutes are called *bajarer meye* (women of the bazaar) as opposed to *gharer meye*, housewives. The bazaar, in this analysis, is that unenclosed, exposed and interstitial 'outside' which acts as the meeting point of several communities.

Structurally speaking; in my terms then, the bazaar or the 'outside' is a place where one comes across and deals with strangers. And if 'strangers', as we have argued, are always suspect and potentially dangerous, it is only logical that the themes of familiarity/unfamiliarity and trust/mistrust should play themselves out in many different aspects of the bazaar. All 'economic' transactions here - bargaining, lending and borrowing, buying and selling - are marked by these themes.

...the bazaar or the street expresses through its own theatre, the juxtaposition of pleasure and danger that constitutes the 'outside' or the open unemployed space. The street is where one has interesting and sometimes marvelous encounters. They do not always eventuate, but the place is pregnant with the possibility. And such pleasures are by nature transgressive because they are pleasures of the inherently risky 'outside'..."

Dipesh Chakrabarty, "Open Space/Public Place: Garbage, Modernity and India", *South Asia*, Vol. XIV, no.1 (1991).

"... The ubiquitous municipal notices in most large Indian cities are vestiges of the colonial administration. Their governing conventions were internalised by the Indian middle class, for whom control of everyday uses of space was an indispensable part of the establishment of their social sovereignty. Colonial rule introduced the conception of disciplining everyday conduct to give shape and form to the body politic. Rules were introduced to produce order and govern everyday behaviour. Sovereignty over society meant that social groups sharing the sovereigns' world had to be made to relate to the world according to the rules of elite imagination, not their own. As part of this social arrangement, it was necessary to obtain the obedience of the poor to a bourgeois conception of what it meant for a space to be a modern city. The ideology of colonial modernity posited a duality between the city and country in which the city was seen as orderly, hygienic, scientific, technologically superior, and 'civilised'. As opposed to the loose disorder of the village, conduct in the city was more standardized. To institute such regimentation of conduct, the colonial administration had to employ certain standardizing techniques.

The municipal sign, a most important weapon in this war against spontaneous 'indiscipline' was a colonial invention. It arrogated to itself, and its invisible enunciators, the function of a constant, relentless surveillance of everyday behaviour, a pretence of unending invigilation over popular conduct. The police were a rather inadequate implement to enforce such a huge civilising project, with such minute attention to detail. What became crucial, through constant intervention, was the reinforcement of the conceptual distinction between the legal and the illegal, between the reassuring fixity of the shops on the streets and the chaos of vendors on the pavement. This task of policing was important precisely because it symbolised the presence of a distinctly Weberian rationalist intelligence acting through the agencies of the state, which constantly kept the rules, governed conduct, and imposed restrictions, without which the minimal precarious order of modern life threatened to dissolve into chaos. The standardising function requires an appropriately standard external form. Street signs were given a standard visual styling. Painted in measured white letters on blue enamelled metal, they gradually became the emblem of the voice of the state. From signs promoting hygiene, to traffic regulations, to directions in huge disorderly railway stations, all were painted in the same standard colour and letter, a livery of municipal sovereignty. Until the 1960s most of these signs were in English, which marked the state's irresistible power and distance by delivering orders in language ordinary subjects could not entirely understand. Nonetheless, it was their obligation to obey the laws, and by a mixture of conjecture, experience, gossip, and improvisation, they managed usually to abide by these incomprehensible regulations..."

Sudipta Kaviraj, "Filth and the Public Sphere", *Public Culture*, 10(1):(Fall, 1997)

Martin Chautari in Kathmandu

Ideas unlimited and thoughts unrestrained

C. K. LAL

Bengalis have their *addas*. There they gather, like-minded Bengalis, to discuss the relevance of Marx, the writings of Jean-Paul Sartre, deterioration in the quality of education, the poetry of Kamala Das or the horses of M. F. Hussain. *Majlis* of Awadh is less eclectic, but no less spirited - the role of religion in society can be quite engrossing.

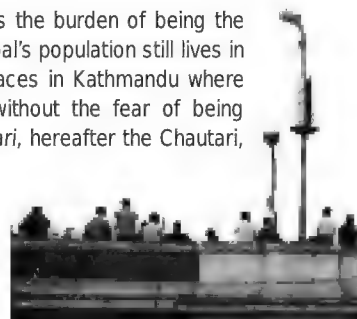
This 'Coffee House' culture was a new name for an ancient habit of us *Homo Sapiens*. We like to gossip, exchange views, share ideas, and simply let words flow in a congenial atmosphere. That is what chat rooms attempt to recreate in the virtual world of Cyberia. But Cyberia lacks the warmth of real life. It is cold out there; anonymity of the Internet fails to connect us with each other.

For women, it used to be the village pond, the community well, or the lonely tree at the edge of the forest where they rested with their load of fodder or firewood. For men, it was invariably the banyan tree, usually near a temple or school. Village elders would gather there to resolve issues of common concern, wonder at the pace of changing times, or merely gossip.

In the hills of Nepal, such a tree, often with a raised platform, is called a *chautari*. The more prosperous and aware the village, the higher the number of *chautaris* in it. But every village would have at least one. Then came the teashops and the *bhattis* - shops selling rice-wine and the cheap edibles that go with it. These took away some of the regulars from the *chautaris*. But it was the radio, and television to a certain extent, which drove the last nail into the coffin of *chautari* culture.

There still are many functional *chautaris* in the countryside of Nepal, but they aren't used as extensively as they used to be. These days, people gather at local teashops, *bhattis*, or the offices of various political parties. Does this decline in the popularity of *chautaris* have something to do with increasing intolerance in Nepali society? Difficult to say, but the fact is that people have less time, and even less inclination, to listen to the views that aren't in consonance with their own.

Kathmandu may be called a metropolitan city, but it carries the burden of being the capital of a primarily rural nation-state. Close to nine-tenths of Nepal's population still lives in villages, without complaint. Unfortunately, there are very few places in Kathmandu where one can express one's outlandish ideas or cranky thoughts without the fear of being ridiculed or worse. But then Kathmandu does have Martin Chautari, hereafter the Chautari, and thank God for that.



To give you a taste of the action, see what happened during one typical discussion. On 9 January 2001, second Tuesday of the month, the topic at Chautari was Darjeeling-based writer Indra Bahadur Rai's path-breaking Nepali novel, *Aaj Ramita Chha*. A rough translation of the book's title would be, *Today is Interesting*, in the sense of the Chinese curse, 'May you live in interesting times'.

The discussion was kicked off by Sangita, a working mother who had ploughed through the book with some effort. Her remark was forthright and unpretentious, "The book ambles without a beginning and an end". Her judgment even more blunt, "It's a difficult read". That is what any reader uninitiated in the nuances of high-literature feels while reading classics, but very few have the courage to accept it. Sangita did, and got an appreciative nod from other participants facing a similar dilemma.

The second reader to comment on the book was Ashutosh, a Harvard graduate and an activist. His suggestion, "Read the book twice to appreciate the slice of life that it serves." After that, an animated discussion for over an hour engaged ex-ambassador and linguist Nobel Kishor Rai, novelist Khagendra Sangraula, poet-satirist Bimal Nibha, writer-commentator Narayan Dhakal, writer-commentator Basant Thapa, novelist Manjushri Thapa and a group of young students in awe of the 'cubist' image of Indra Bahadur Rai. Discussions over, those participants who wanted to contribute to tea-kitty, Nepali rupees ten each, did so and went their separate ways - contented, and perhaps, enlightened. Most of them will come back for another *Mangalbare* - the discussion every Tuesday at Chautari.

Topics for discussion vary. From property rights for women to the lack of trust laws in Nepal, from the predicament of people of the Nepal Terai to the status of women in Vedic literature, and from the threat to democracy to the vibrancy of the press—any topic that is of interest to anyone, which means anything, can be taken up for discussion at Chautari. The procedure is simple. The program for the month is fixed in advance, and circulated through e-mail, photocopies and word-of-mouth. The main speaker - the pundit in Chautari-speak - presents his views for about half-an-hour. After that, it is a free-for-all. Anyone with a view can be an expert commentator or an interrogator. Questions and comments flow for one-and-half hours. Sometimes it can go on even longer.

This is the Chautari then - an informal platform for a free flow of ideas.

By its very nature, Chautari has no hierarchy. As one of Chautari's convenors Pratyoush Onta asserts, "Chautari disagrees with the tradition of an elite speaking from the pulpit to an audience of lesser mortals listening respectfully. It is a forum for dialogue, or even polylogue, if such a thing is possible."

That, in essence, is the mission statement of sorts - formally not declared, but universally accepted by all those who frequent Chautari. Here, Doctors of Philosophy and learners for life are equally patient in observing the many splendours of truth. "I am right, you are also right. I may be wrong, so could you. Let us think, listen, speak and re-think. Let us together develop a culture of communication". Deceptively simple, exceedingly challenging, and one hell of a good time - this business of the exploration of the mind.

It is this simplicity that has seen Chautari grow from its humble beginnings in October



1991 when water-resources engineer Bikash Pandey, Norwegian engineer Odd Hoftun and his Nepal-born political scientist son Martin initiated a fortnightly discussion forum on 'Development Philosophy'. When Martin died in a plane-crash in July 1992 on his way back to Nepal from Oxford where he was a student, Odd Hoftun made available a space for the discussion forum to continue. Since April 1995, it has come to be called Martin Chautari.

Today, Chautari is run by its members - a committed mix of idealistic activists, journalists, writers, commentators and students. Though Chautari itself continues to remain within the world of the word - spoken and written, its members have notched up remarkable successes in social activism. Recently, it functioned as the focal point of a movement for the emancipation of bonded agriculture labour in the western part of the country. Earlier, Chautari members spearheaded the campaign to oust diesel three-wheelers from the Kathmandu Valley and succeeded where better funded NGOs and INGOs had failed to make a dent. On several controversial issues, Chautari is the first place where non-conformist ideas are expressed and discussed.

After a decade of its lively existence, Chautari is engaged in reassessing itself at the moment. In an internal document floated for discussion, Ashutosh observes without hesitation, "Chautari's flagship program - Mangalbare - is both a success and an anomaly". Agrees Pratyoush Onta, "Even though it is exceedingly successful on its own, its failure to replicate itself in Kathmandu as well as elsewhere in Nepal needs serious attention". Though such retrospection is commendable, the charitable view could be that it is indeed lonely at the top. The kind of commitment required to run such a stimulating forum of discussion is not very common everywhere. It is even less so in a society like Nepal where intellectuals do not consider themselves 'learners', but take themselves very seriously as interpreters of divine wisdom.

But Chautari has ignited a change. The ideas propounded by Chautari - of tolerance, respect for the other, and the freedom of thought and speech without the fear of ridicule - remain with whoever comes into contact with it. How many institutions can claim to have initiated a culture, and then sustained it for over a decade, by sticking to their undeclared mission?

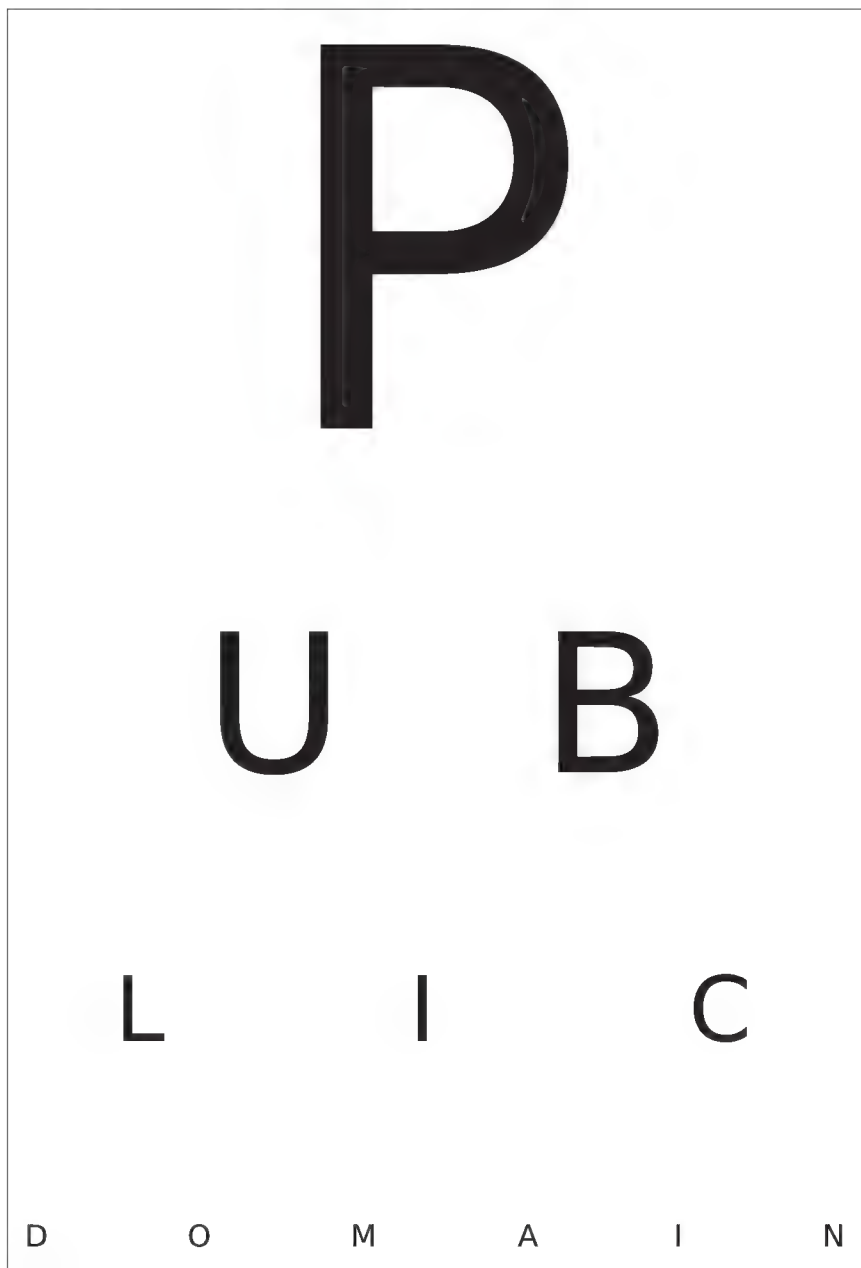
Call it modesty, but success seems to sit lightly on the members of Chautari. They laugh and call it the reward of a job well done for its own sake. It is this nonchalance that makes Chautari what it is - a live chat-room. Forget its Internet versions for now. In a country of twenty three million people, Nepal only has about three hundred thousand phone lines, fifty thousand computers, and less than thirty thousand Internet connections. Face-to-face encounters are still the most effective channel of communication, and for that, *chautaris* are still relevant, even important.

Chautari keeps the Socratic tradition alive in a city that is increasingly acquiring the impersonality of a metropolis without fully acquiring its urbanity. This in itself is something to celebrate.



IS A PRISON AT THE MARGINS, OR AT THE HEART, OF THE PUBLIC SPHERE?





Frequently Asked Questions about the Public Domain

ERIC KLUITENBERG

This FAQ about the public domain has been re-edited for a second time after it first appeared in Dutch language. The original Dutch version was the result of an extensive 'Public Research' called 'Public Domain 2.0', carried out by the Society for Old and New Media (De Waag) in Amsterdam in the beginning of 1998.

The rhetoric of the 'Information Super-Highway' and the 'Digital Revolution' are dominated by anti-statist and neo-liberal discourses. The 'Public Domain 2.0' project questioned the self-evident nature of these assertions. The project can be seen as an attempt to reassert public agency in the information age, not as a given, but as a sphere which urgently needs to be reinvented to address the conditions of the unfolding era of global information and communication systems.

1. What is the public domain?

First of all the public domain as a social and cultural space should be distinguished from its juridical definition. The public domain is traditionally understood as a commonly shared space of ideas and memories, and the physical manifestations that embody them. The monument as a physical embodiment of community memory and history exemplifies this principle most clearly. Access, signification, disgust, and appropriation of the public monument are the traditional forms in which the political struggles over collective memory and history are carried out.

Juridical Definition:

1: land owned directly by the government.

2: the realm embracing property rights that belong to the community at large, are unprotected by copyright or patent, and are subject to appropriation by anyone.

(Date: 1832)

[Source: WWWebster Dictionary - <http://www.m-w.com/dictionary>]

Commentary:

Esma Moukthar: "What we today call the 'public domain' consists of a multiplicity of places and virtual spaces, in which people do gather, but not primarily to find differences, but to find agreement. Agreement with that which at that particular moment constitutes your chosen identity. Thus the differences search for their own place and direction. Each their own public domain as an extension of what is private."

Moukthar contrasts this definition with Hanna Arendt's, "The space created by the plurality of people".

[Source: Esma Moukthar, *Publiek Domein: Privé-Domein*, PHD Thesis, University of Amsterdam, 1998]

2. What is the public domain 2.0?

Public Domain 2.0 is the future public space in a digital media environment. A space which is neither dominated by commercial interests (market driven), nor monopolised by the state. Apart from publicly accessible information, active public participation is a distinctive characteristic of the Public Domain 2.0. The public in part determines the design and content of this new public space.

Many discussions about the information society tend to emphasise either the role of industry, or that of the state. Notably absent in these discussions is the third sector; social and cultural organisations, organisations for mental and health care, non-governmental organisations (NGO's), and community and interest groups.

3. Who owns the public domain?

Everyone and no one. The public domain of information and communication should not be monopolised by the state nor by commercial corporations.

4. What is a network society?

To answer this question we must first ask:

4.1: What is an Information Economy?

The information sector of an economy is that sector whose products consist principally of information goods.

Information goods are non-material goods. They are most easily distinguished by the fact that they can be stored in various media and when stored in electronic media, their cost of reproduction becomes negligibly low. Some examples of information goods include software, music, video, databases, books, machine designs, genetic information, and other copyrighted or patented goods.

When the information sector of an economy becomes more dominant than either its industrial or ecology sector, then that economy has become an information economy.

[Source: Roberto Verzola, *Cyberlords: The Rentier Class of the Information Sector*

Resources: <http://www.tao.ca/earth/lk97/archive/0174.html>]

4.2: When is it appropriate to speak of an Information Society?

A society in which Information and Communication Technology has become the dominant technology, and whose economy is primarily an information economy, can be called an information society. Another commonly used term for this kind of society is 'Post-Industrial Society'.

4.3: And what about the Network Society?

Sociologist Manuel Castells concludes in his book *The Rise of the Network Society*, "...as a historical trend, dominant functions and processes in the information age are increasingly organised around networks. Networks constitute the new social morphology of our societies, and the diffusion of networking logic substantially modifies the operation and outcomes in processes of production, experience, power, and culture. While the networking form of

social organisation has existed in other times and spaces, the new information technology paradigm provides the material basis for its pervasive expansion throughout the entire social structure."

[Source: Manuel Castells, *The Rise of the Network Society: The Information Age Vol.1*, Blackwell Publishers, Malden (Mass.), 1996, p. 469]

Commentary:

"...people still live in places. But because function and power in our society are organised in the space of flows, the structural domination of its logic essentially alters the meaning and dynamic of places. Experience, by being related to places, becomes abstracted from power, and meaning is increasingly separated from knowledge. It follows a structural schizophrenia between two spatial logics that threatens to break down communication channels in society. The dominant tendency is toward a horizon of networked, ahistorical space of flows, aiming at imposing its logic over scattered, segmented places, increasingly unrelated to each other, less and less able to share cultural codes. Unless cultural and physical bridges are deliberately built between those two forms of space, we may be heading toward life in parallel universes whose times cannot meet because they are warped into different dimensions of a social hyperspace".

[Source: Castells, 1996, p. 428]

5.1: What is Free Software?

'Free software' is a matter of liberty, not price. To understand the concept, you should think of 'free speech', not 'free beer'.

'Free software' refers to users' freedom to run, copy, distribute, study, change and improve the software. More precisely, it refers to four kinds of freedom for the users of the software:

(**freedom 0**) The freedom to run the program, for any purpose.

(**freedom 1**) The freedom to study how the program works, and adapt it to your needs. Access to the source code is a precondition for this.

(**freedom 2**) The freedom to redistribute copies so you can help your neighbour.

(**freedom 3**) The freedom to improve the program, and release your improvements to the public, so that the whole community benefits. Access to the source code is a precondition for this.

A program is free software if users have all of these freedoms.

[Source: Free Software Foundation - <http://www.gnu.org/philosophy/free-sw.html>]

5.2: What is open source?

The basic idea behind open source is very simple. When programmers on the Internet can read, redistribute, and modify the source for a piece of software, it evolves. People improve it, people adapt it, people fix bugs. And this can happen at a speed that, if one is used to the slow pace of conventional software development, seems astonishing.

We in the open-source community have learned that this rapid evolutionary process produces better software than the traditional closed model, in which only a very few pro-

grammers can see source and everybody else must blindly use an opaque block of bits.

A complete definition of Open Source can be found at:

<http://www.opensource.org/osd.html>

[Source: The Open Source Initiative (OSI) - <http://www.opensource.org>]

5.3: What is copyleft?

The simplest way to make a program free is to put it in the public domain, un-copyrighted. This allows people to share the program and their improvements, if they are so minded. But it also allows uncooperative people to convert the program into proprietary software. They can make changes, many or few, and distribute the result as a proprietary product. People who receive the program in that modified form do not have the freedom that the original author gave them; the middleman has stripped it away.

In the GNU project, our aim is to give all users the freedom to redistribute and change GNU software. If middlemen could strip off the freedom, we might have many users, but those users would not have freedom. So instead of putting GNU software in the public domain, we 'copyleft' it. Copyleft says that anyone who redistributes the software, with or without changes, must pass along the freedom to further copy and change it.

Copyleft guarantees that every user has freedom.

[Source: Free Software Foundation - <http://www.gnu.org/copyleft/copyleft.html>]

5.4: Why are free software, open source, and copyleft relevant for the public domain 2.0?

Copyright and intellectual property protection, though invented to protect the rights of authors, increasingly serve the interests of intermediaries, publishers, software and media conglomerates. The increasing tendencies towards integration and mega mergers in and across these sectors create anti-markets that stifle the development of new products and ideas, promote pricing that is unrelated to production costs and as a result high consumer prices, and finally make markets increasingly inaccessible for new players.

The network logic can work in two opposed directions, towards the winner-takes-all effect: because many people use a given product more people use it, i.e. monopolies emerge as a 'natural' result. Or the fact that value of a network product rises because more people use it can promote systems of free distribution, shareware, and gift economies. This is a matter of choice, not necessity.

6. What is convergence?

"The term convergence eludes precise definition, but it is most commonly expressed as: The ability of different network platforms to carry essentially similar kinds of services, or the coming together of consumer devices such as the telephone, television and personal computer". (...)

Traditionally, communications media were separate. Services were quite distinct - broadcasting, voice telephony and on-line computer services. They operated on different networks and used different 'platforms': TV sets, telephones and computers. Each was regulated by different laws and different regulators, usually at national level.

Nowadays digital technology allows a substantially higher capacity of traditional and new services to be transported over the same networks and to use integrated consumer devices for purposes such as telephony, television or personal computing.

Telecommunications, media and IT companies are using the flexibility of digital technologies to offer services outside their traditional business sectors, increasingly on an international or global scale.

[Source: European Commission, *Green Paper on the Convergence of the Telecommunications, Media and Information Technology Sectors, and the Implications for Regulation: Towards an Information Society Approach*, Brussels, 3 December 1997. This and other papers can be found at: <http://www.ispo.cec.be/convergencegp/>]

Commentary:

As a result of the convergence of formerly separate media and (tele-)communications industries a gigantic fusion and merger process is haunting these industries. These mergers principally take two shapes: Firstly, 'horizontal integration': Companies within a certain business segment integrate to achieve a greater share in the world's media and communication markets. More interestingly, there also is a strong movement towards 'vertical integration', where mergers cut across various business segments; i.e. cable operators going into telephony, fusions of telecommunication companies and media content producers, software companies buying into film - and media - production companies.

Economists will always argue against vertical integration, putting production and distribution in one hand, which sets ideal conditions for the creation of what Braudel calls 'anti-markets'. Vertical integration has been an on-going process in the media and telecommunications industries, but it was the recently accepted mega merger between Internet provider *AmericaOnLine* and media giant *TimeWarner* that shocked the business and the media world alike. Though it remains to be seen if this colossus will turn out to be a successful venture, it is clear that the power issue, putting internet access, cable networks, TV and news stations, radio, magazines and print publishers under the helm of one single board of directors on such an unprecedented scale, is a direct threat to the freedom of information.

7. Who is going to pay for the public domain?

Right now the user generally pays for the telecommunications services according to use; in other words the consumer pays. In many European countries public broadcasting services are, on the contrary, financed through the state-budget, often via a public broadcasting fee paid by viewers and listeners. Commercial broadcasting is financed through sponsorship and advertisement.

If the public domain in the digital media environment is viewed as a community service, an alternative financial model will have to be developed. This will require either a restructuring of the budget for public broadcasting services, or the institution of an 'info-tax' on the commercial use of communication networks. Out of these revenues funds can be established, out of which community services that run over existing emerging networks can be financed.

8. Does the public domain still exist?

Like the public urban space, also the public media domain is threatened by privatisation and increased surveillance. These threats are now most pertinent for the Internet. While the proliferation of commercial communication in the mass-media in Europe is controlled by regulation, commercial exploitation is unrestricted, or even encouraged, in the case of the Internet.

9. Why is the right to communication necessary?

"The quality of information provision affects the ways in which we exercise our civil rights. These rights also imply the civil responsibility to monitor and respond to social developments. This can only be done adequately when we are properly informed through such media as broadcasting, the press, or the Internet".

[Source: Introduction to the *People's Communication Charter*]

Access to information and communication should be seen as fundamental democratic right for all citizens of the world, not as an asset or simply a consumer product.

Commentary:

The People's Communication Charter (PCC):

"The People's Communication Charter represents a citizens' demand for the protection of the quality of communication services and the provision of information. Communication services should be user-friendly, accessible and affordable and information should be reliable and pluralist.

(...) Rapid developments in the field of information and communication technology (digitalisation, the emergence of new media and network connectivity) have a far-reaching impact on society. The commercialisation of knowledge creates more and more situations in which a price tag is attached to the provision of information. As a result, a social gap grows between those who can afford access to information and those who will be excluded. Moreover, numerous mergers and joint ventures create powerful media conglomerates that escape adequate public control. In order to monitor these developments critically, it is urgent to initiate a global civil movement. In such areas as human rights, environmental protection and consumer interests, there is already a great deal of civil action. This has so far not been the case in the field of information and communication.

The eighteen articles of the People's Communication Charter can be summed up with these five key themes:

1. Communication and Human Rights

Communication and information services should be guided by respect for fundamental human rights.

2. Public Domain

Communication resources (such as airwaves and outer space) belong to the 'commons'; they are public domain and should not be appropriated by private parties.

3. Ownership

Communication and information services should not be monopolized by governments or business firms.

4. Empowerment

People are entitled to the protection of their cultural identity and to the development of their communicative skills.

5. Public accountability

Providers of communication and information services should accept public accountability for the quality of their performance”.

[Source: Introduction to the *People's Communication Charter*:

<http://www.waag.org/pcc>]

10. How can a public domain 2.0 be created?

Besides the existing public media channels, new forms of public media uses should be stimulated. Important are in particular new forms of media practice that aim at an active involvement of ordinary citizens in the new information and communication environments. Interactive media such as the internet are characterised by the fact that they are participatory media, and not merely oriented towards passive media consumption. In a participatory medium the user also becomes a provider of content, individually or in co-operation with others. Incidentally these kind of self-created services may be economically viable in themselves, but more often they relate to the cultural and social self-expression of citizens.

The Topoi of e-space

Global cities and global value chains

SASKIA SASSEN



Electronic space is easily read as a purely technological event and in that sense as self-contained and neutral. But this is a partial account. In this brief essay I will argue that what is left out of this technological reading is that electronic space is embedded in the larger dynamics organizing society. Whether in the geography of its infrastructure or the structuration of cyberspace, it is inscribed and to some extent shaped by power, concentration, contestation, as well as openness and decentralization. Thus it is by now well known that the particular features of the Internet are in part a function of the early computer hacker culture which designed software that strengthened the openness and decentralization of the Net and which sought to make it universally available. It is also clear that in the last two years, when business discovered the Net, we are seeing attempts to commercialise it through the development of software that can capitalize on the net properties and through the extension of copyrights - in other words, the opposite of the early hacker culture.

In this regard, it seems to me that we need to re-theorize electronic space and uncouple it analytically from the properties of the Internet which have shaped our thinking about electronic space. We tend to think of this space as one that is characterized by distributed power, by the absence of hierarchy. The Internet is probably the best known and most

noted. Its particular attributes have engendered the notion of distributed power: decentralization, openness, possibility of expansion, no hierarchy, no centre, no conditions for authoritarian or monopoly control.

Yet the networks are also making possible other forms of power. The financial markets, operating largely through private electronic networks, are a good instance of an alternative form of power. The three properties of electronic networks: speed, simultaneity and interconnectivity have produced strikingly different outcomes in this case from those of the Internet. These properties have made possible orders of magnitude and concentration far surpassing anything we had ever seen in financial markets. The consequence has been that the global capital market now has the power to discipline national governments, as became evident with the Mexico 'crisis' of December 1994. We are seeing the formation of new power structures in electronic space, perhaps most clearly in the private networks of finance but also in other cases.

The concern in this brief essay is to elaborate the proposition that electronic space is embedded and to do so through an examination of what I think of as cyber-segmentations. The focus here is particularly on economic electronic space, and the digitalisation of a growing component of the economy. This focus provides a particular set of analytic pathways to the broader notion that electronic space is embedded. These are pathways grounded in realms of practice rather than in ideas about electronic space. It is the beginning of a research inquiry and presents only elements of a new theorization. Whether this analysis is pertinent, or can be used for other types of electronic space and realms of practice is a question I cannot answer and probably is a question for research.

There is another side to this story which I will only touch on briefly which has to do with the fact that the ascendancy of digitalisation and virtualisation is also, in turn, inscribing lived experience and the mental categories through which we experience and understand, as well as engendering new mentalities till now largely confined to particular subcultures. Here I examine three ways in which the embedded-ness of electronic space can be captured:

>>> There is no fully virtualised enterprise nor fully digitalized industry. Leading economic sectors that are highly digitalized require strategic sites with vast concentrations of infrastructure, the requisite labour resources, talent, buildings. This holds for finance but also for the multimedia industries which use digital production processes and produce digitalized products.

>>> The sharpening inequalities in the distribution of the infrastructure for electronic space, whether private computer networks or the Net, in the conditions for access to electronic space, and, within electronic space, in the conditions for access to high-powered segments and features, are all contributing to new geographies of centrality both on the ground and in electronic space.

>>> Commercialisation of public networks and hierarchical concentrations of power in private networks are producing what I think of as cyber-segmentations-instantiations of dynamics of inequality and of power.

After an examination of these three subjects the final section incorporates these issues in a larger discussion about space and power.

1. The Topoi of E-space: Global Cities and Global Value Chains

The vast new economic topography that is being implemented through electronic space is one moment, one fragment, of an even vaster economic chain that is in good part embedded in non-electronic spaces. There is no fully virtualised firm and no fully digitalized industry. Even the most advanced information industries, such as finance, are installed only partly in electronic space. And so are industries that produce digital products, such as software designers. The growing digitalisation of economic activities has not eliminated the need for major international business and financial centres and all the material resources they concentrate, from state of the art telematics infrastructure to brain talent.

Nonetheless, telematics and globalisation have emerged as fundamental forces reshaping the organization of economic space. This reshaping ranges from the spatial virtualisation of a growing number of economic activities to the reconfiguration of the geography of the built environment for economic activity. Whether in electronic space or in the geography of the built environment, this reshaping involves organizational and structural changes. Telematics maximizes the potential for geographic dispersal and globalisation entails an economic logic that maximizes the attraction/profitability of such dispersal.

One outcome of these transformations has been captured in images of geographic dispersal at the global scale and the neutralization of place and distance through telematics in a growing number of economic activities. Yet it is precisely the combination of the spatial dispersal of numerous economic activities and telematic global integration which has contributed to a strategic role for major cities in the current phase of the world economy. [3] Beyond their sometimes long history as centres for world trade and banking, these cities now function as command points in the organization of the world economy; as key locations and marketplaces for the leading industries of this period (finance and specialized services for firms); and as sites for the production of innovations in those industries. The continued and often growing concentration and specialization of financial and corporate service functions in major cities in highly developed countries is, in good part, a strategic development. It is precisely because of the territorial dispersal facilitated by telecommunication advances that agglomeration of centralizing activities has expanded immensely. This is not a mere continuation of old patterns of agglomeration but one could posit, a new logic for agglomeration. A majority of firms and economic activities do not inhabit these major centres.

Centrality remains a key property of the economic system but the spatial correlates of centrality have been profoundly altered by the new technologies and by globalisation. This engenders a whole new problematic around the definition of what constitutes centrality today in an economic system where

- > a share of transactions occur through technologies that neutralize distance and place, and do so on a global scale;

- > centrality has historically been embodied in certain types of built environment and urban form. Economic globalisation and the new information technologies have not only reconfigured centrality and its spatial correlates, they have also created new spaces for centrality.

As a political economist interested in the spatial organization of the economy and in the spatial correlates of economic power, it seems to me that a focus on place and infra-

structure in the new global information economy creates a conceptual and practical opening for questions about the embedded-ness of electronic space. It allows us to elaborate that point where the materiality of place/infrastructure intersects with those technologies and organizational forms that neutralize place and materiality. And it entails an elaboration of electronic space, the fact that this space is not simply about transmission capacities but also a space where new structures for economic activity and for economic power are being constituted.

2. A New Geography of Centrality

We are seeing a spatialisation of inequality, which is evident, both in the geography of the communications infrastructure and in the emergent geographies in electronic space itself. Global cities are hyper-concentrations of infrastructure and the attendant resources while vast areas in less developed regions are poorly served. But also within global cities we see a geography of centrality and one of marginality. For instance, New York City has the largest concentration of fibre optic cable served buildings in the world; but they are mostly in the centre of the city, while Harlem, the black ghetto, has only one such building. And South Central Los Angeles, the site of the 1993 uprisings, has none.

There are many instantiations of this new unequal geography of access. Infrastructure requires enormous amounts of money. For example, it is estimated that it will cost US\$ 120 billion for the next ten years just to bring the Central and East European countries communication networks up to date. The European Union will spend US\$ 25 billion a year to develop a broadband telecommunications infrastructure. The levels of technical development to be achieved by different regions and countries, and indeed, whole continents, depend on the public and private resources available and on the logic guiding the development. This is evident even with very basic technologies such as telephone and fax: in very rich countries there are 50 telephone lines per person; in poor countries, fewer than ten. In the US there are 4.5 million fax machines and in Japan, 4.3 million, but only 90,000 in Brazil, 30,000 in each Turkey and Portugal, and 40,000 in Greece.

And then there are the finer points. The worldwide deployment of integrated services digital networks (ISDN) depends on interoperability and on a technology base. Both of these conditions severely restrict where it will actually be available. For example, even in Europe where there is a common communications policy calling for harmonization, ISDN deployment varies greatly: in France it has reached 100%; in Greece it is virtually nonexistent. Another instance, the establishment of the General European Network which provides 8 channels of two megabits per second each, does so only among nodes in Frankfurt, Paris, London, Madrid, and Rome - a select geography. The availability of leased two Mbps circuits in Europe is highly uneven - from 40,000 circuits in Great Britain to 17 in Ireland (as of the early 1990s).

Space is not simply about transmission capacities.

The growing economic value and hence potential profitability of communications are creating enormous pressures towards deregulation and privatisation. The fact that the top players need state of the art communication systems further creates pressure for immense amounts of capital and high-level expertise. This has meant that pub-

lic telecoms all over the world are finding themselves between the pressures to privatise coming from the private sector and the insufficiency of public funds to develop state of the art systems – systems which may well largely benefit top players. Even in countries such as France and Germany, with long held preferences for state control, we are now seeing partial privatisation.

Similar developments are taking place in countries as diverse as Japan, Australia, New Zealand, Singapore, Indonesia and Malaysia. The notion, particularly in less developed countries, is that privatisation will help them gain access to the foreign capital and expertise they need to develop their national infrastructure. Thus Mexico, Argentina, Venezuela, India and even China are considering such initiatives.

Deregulation and privatisation are facilitating the formation of megafirms and global alliances. Further, new technological developments are facilitating convergence between telecommunications, computers and TV leading to the formation of a mega multimedia sector. Globalisation is a key feature of the new multimedia sector. And all developments signal that this will only grow. These global players and the state of the art infrastructure and technologies they will have access to, can only increase the distance between the technological have and have-nots among firms and among consumers.

Finally, once in cyberspace users will also encounter an unequal geography of access. Those who can pay for it will have fast speed servicing, and those who can't will increasingly find themselves in very slow lanes. For instance, Time Warner ran a pilot project in a medium sized community in the U.S. to find out whether customers would be willing to pay rather high fees for fast services; they found that customers would, that is, those who could pay. The next section examines some of these issues.

3. Emergent Cyber-segmentations

One way of beginning to conceptualise the possibility of forms of structuration in electronic space is to specify emerging forms of segmentation. There are at least three distinct forms of cyber-segmentation we can see today. One of these is the commercialising of access, a familiar subject. A second is the emergence of intermediaries to sort, choose, evaluate information for paying customers. A third, and the one I want to focus on in some detail, is the formation of privatised firewalled corporate networks on the Web.

Regarding commercialisation of access, what matters for me here are not the current forms assumed by paid services, but what lies ahead. Current commercial forms of access are undergoing change. Microsoft, after being an Internet laggard is now offering free Internet access and browser programs. And AT&T, the world's largest telephone company,

Once in cyber-space, users will also encounter an unequal geography of access.

has just announced it will offer free access to the Internet to its customers. All this free access offered by giants in the industry is tactical. There is right now an enormous battle among the major players to gain strategic advantages in what remains a fairly unknown, under-specified market. Microsoft's strategy in the past has been to set the standard, which it did for operating systems. The issue today, it seems, is once again to set standards, and to do this by providing the software for free in order

eventually to control access and browsing standards and thus be able to charge.

We cannot underestimate the extent of the search for ways to control, privatise, commercialise. Three major global alliances have been formed that aim at delivering a whole range of services to clients. While the mechanisms for commercialisation may not be available now, there is enormous effort to invent the appropriate billing systems. It is worth remembering that in the U.S. the telephone system started in the late 1800s as a decentralized, multiple-owner network of networks: there were farmers telephone networks, mutual aid societies telephone networks, etc. This went on for decades. But then in 1934 the Communications Act was passed defining the communication systems as a 'natural monopoly situation' and granting AT&T the monopoly. AT&T is up to 60% a billing company: it has invented and implemented billing systems. And much effort today is likely to be addressing the question of a billing system for access to and use of what is now public electronic space.

The approach towards gaining control is through strategic partnerships. Growth strategies and global alliances are not only geared to provide computer services and telephone calls, but also data transmission, video conferencing, home shopping, television, news, entertainment. Mergers and acquisitions have risen sharply in the global IT industries, as companies are seeking the size and technology to compete in global markets. In 1995 these transactions reached record numbers, with 2,913 deals, that is a 57% increase over the 1,861 recorded in 1994. The total value of these deals was US\$ 134 billion, which is a 47% increase over the US\$ 90.5 billion in 1994. Deregulation is a key step towards the expansion in service coverage and the formation of global alliances. But experts are forecasting that after a period of sharp global competition, a few major global players will monopolize the business. AT&T already has the nation-wide infrastructure and a billing system in place to provide and charge for services.

Intranets: Towards Firewalled Citadels on the Web?

Perhaps one of the most significant new developments is the use of the Web and firewalls by firms to set up their own internal computer networks. Rather than using costly computer systems that need expert staffing and employee training, firms can use the Web to do what those systems do at almost no cost and with little need for expert staffing. Firms save enormous amounts of money by using the Web for their own internal corporate purposes.

Is this a private appropriation of a public good? It seems to me there are definite elements of this here, especially in view of the millions of dollars firms can save. Are the firewalled intranets the citadels of electronic space? The formation of private intranets on the Web is probably one of the more disturbing instances of cyber-segmentation. I would like to give some details about it here since it is a very recent development but one that is growing very rapidly.

About a year ago business discovered that the WWW is a great medium to communicate with customers, partners, investors. Now they are using the WWW to set up internal networks, surrounded by firewalls. Beyond very elementary uses such as information about new developments, directories that can be updated easily, these intranets create access to a firm's various databases, and make these easy to use for everyone in the firm, no

matter what computer systems, software or time zone they are in. Firms can avoid complicated, costly and time consuming retrieval procedures which have often meant that these databases were de facto of little use in decision-making. Lotus Notes, the leading provider of internal computer network technology has far more complexity than is often necessary; and it is expensive and requires expert staffing.

Private intranets use the infrastructure and standards of the Internet and WWW. This is cheap and astoundingly efficient compared to other forms of internal communication systems. Because Web browsers run on any type of computer, the same electronic information can be viewed by any employee. Intranets using the Web can pull all the computers, software and databases of a corporation into a single system that enables employees to find information wherever it is in the system. Computer and software makers have been promising this for a while but have not yet delivered it. Now firms have found that the Web can do it for them.

This all has had sharp effects in changing the software industry. At first software makers focused on Web browsers and other programs aimed at making the Web a consumer medium. Now it's increasingly aimed at building intranets for firms using the Web. Thus the firewalling of sites on the Web is only going to continue to expand at growing speed.

Conclusion: Space and Power

Electronic space has emerged not simply as a means for transmitting information, but as a major new theatre for capital accumulation and the operations of global capital. This is one way of saying that electronic space is embedded in the larger dynamics organizing society, particularly the economy.

There is no doubt that the Internet is a space of distributed power that limits the possibilities of authoritarian and monopoly control. But it is becoming evident over the last two years that it is also a space for contestation and segmentation. Further, when it comes to the broader subject of the power of the networks, most computer networks are private. That leaves a lot of network power that may not necessarily have the properties/attributes of the Internet. Indeed, much of this is concentrated power and reproduces hierarchy rather than distributed power.

The Internet and private computer networks have co-existed for many years. But there is something different today, and that drives my concern with the need to re-theorize the Net and the need to address the larger issue of electronic space rather than just the Net, or public electronic space. The three subjects discussed above can be read as an empirical specification of major new conditions: the growing digitalisation and globalisation of leading economic sectors has further contributed to the hyper-concentration of resources, infrastructure and central functions, with global cities as one strategic site in the new global economic order; the growing economic importance of electronic space which has furthered global alliances and massive concentrations of capital and corporate power, and contributed to new forms of segmentation in electronic space. These have made electronic space one of the sites for the operations of global capital and the formation of new power structures.

What these developments have meant is that suddenly the two major actors in elec-

tronic space - the corporate sector and civil society - which until recently had little to do with one another in electronic space, are running into each other. Then as today, corporate actors largely operate in private computer networks. But two years ago business had not yet discovered the Internet in any significant fashion, the World Wide Web - the multimedia portion of the Net with all its potentials for commercialization - had not yet been invented, and the digitalization of the entertainment industry and of business services had not exploded on the scene.

This is also the context within which we need to read the recent and sharp trends towards deregulation and privatisation which have made it possible for the telecommunications industry to operate globally and in a growing number of economic sectors. It has profoundly altered the role of government in the industry, and, as a consequence has further raised the importance of civil society as a site where a multiplicity of public interests can, wittingly or not, resist the overwhelming influence of the new corporate global actors. Civil society, from individuals to NGOs, has engaged in a very energetic use of cyberspace from the bottom up.

To the extent that national communication systems are increasingly integrated into global networks, national governments will have less control. Further, national governments will feel sharp pressure to help firms become incorporated into the global network, to avoid the risk of being excluded from the increasingly electronically operated global economic system. If foreign capital is necessary to develop the infrastructure in developing countries, the goals of these investors may well rule and shape the design of that infrastructure. This is of course reminiscent of the development of railroads in colonial empires, which were clearly geared towards facilitating imperial trade rather than the territorial integration of the colony. Such dependence on foreign investors is also likely to minimize concerns with public applications, from public access to uses in education and health.

There are today few institutions, at the national or global level, that can deal with these various issues. It is in the private sector where this capacity lies, and then only among the major players. We are at risk of being ruled by the MNCs, accountable only to the global market. Most governmental, non-profit and supranational organizations are not ready to enter the digital age. The political system even in the most highly developed countries is operating in a pre-digital era.

The overwhelming influence that global firms and markets have gained in the last two years in the production, shaping and use of electronic space along with the shrinking role of governments, has created a political vacuum. But it does not have to.

Because the ascendance of digitalization is a new source of major transformations in society, we need to develop it as one of the driving forces of sustainable and equitable development in the world. It should be a key issue in political debates about society, particularly equity and development. We should not let business and the market shape 'development' and dominate the policy debate. The good side of the new technology, from participation to telemedicine, is not necessarily going to come out of market dynamics.

Further, even in the sites of concentrated power, these technologies can be destabilizing. The properties of electronic networks have created elements of a crisis of control within the institutions of the financial industry itself. There are a number of instances that

illustrate this: the stock market crash of 1987 brought on by program trading and the collapse of Barings Bank brought on by a young trader who managed to mobilize enormous amounts of capital in several markets over a period of six weeks. Electronic networks have produced conditions that cannot always be controlled by those who meant to profit the most from these new electronic capacities. Existing regulatory mechanisms cannot always cope with the properties of electronic markets. Precisely because they are deeply embedded in telematics, advanced information industries also shed light on questions of control in the global economy that not only go beyond the state but also beyond the notions of non-state centered systems of coordination prevalent in the literature on governance.

Finally, the Net as a space of distributed power can thrive even against growing commercialization. But we may have to reinvent its representation as impervious to such commercialization and as universally accessible. It may continue to be a space for *de facto* (i.e. not necessarily self-conscious) democratic practices. But it will be so partly as a form of resistance against overarching powers of the economy and of hierarchical power, rather than the space of unlimited freedom which is part of its representation today. It seems to me that there are enough changes in the last two years to suggest that the representation of the Internet needs to be subjected to critical examination. Perhaps the images we need to bring into this representation increasingly need to deal with contestation and resistance, rather than simply the romance of freedom and interconnectivity. Further, one of the very important features of the Internet is that civil society has been an energetic user; but this also means that the full range of social forces will use it, from environmentalists to fundamentalists such as the Christian Coalition in the U.S. It becomes a democratic space for many opposing views and drives, and for a range of criminal uses - often referred to as the 'blacknet'.

This is a particular moment in the history of electronic space, one when powerful corporate actors and high performance networks are strengthening the role of private electronic space and altering the structure of public electronic space. But it is also a moment when we are seeing the emergence of a fairly broadbased - though as yet a demographic minority - civil society in electronic space. This sets the stage for contestation.



Claiming the City

... As a matter of fact, the emergence of mass democracies in the advanced industrial countries of the West in the 20th century has produced a new distinction between the domain of theory built around the idea of the citizen and the domain of policy inhabited not by citizens but by populations. Unlike the concept of the citizen, the concept of population is wholly descriptive and empirical: it does not carry a normative burden. Populations are identifiable, classifiable and describable by empirical or behavioral criteria and are amenable to statistical techniques such as censuses and sample surveys. Unlike the concept of citizen which carries the ethical connotation of participation in the sovereignty of the state, the concept of population makes available to government functionaries a set of rationally manipulable instruments for reaching large sections of the inhabitants of a country as the targets of their 'policies' - economic policy, administrative policy, law and even political mobilisation. Indeed, as Michel Foucault has pointed out, a major characteristic of the contemporary regime of power is a certain 'governmentalisation of the state'. This regime secures legitimacy not by the participation of citizens in matters of state but by claiming to provide for the well being of the population. Its mode of reasoning is not deliberative openness but rather an instrumental notion of costs and benefits. Its apparatus is not the republican assembly but an elaborate network of surveillance through which information is collected on every aspect of the life of the population that is to be looked after. It is not surprising that in the course of the present century, ideas of participatory citizenship that were so much a part of the Enlightenment notion of politics have fast retreated before the triumphant advance of governmental technologies that have promised to deliver more well-being to more people at less cost. Indeed, one might say that the actual political history of capital has long spilled over the normative confines of liberal political theory to go out and conquer the world through its governmental technologies.

In countries of Asia and Africa, where the career of the modern state has been foreshortened, ideas of republican citizenship have sometimes accompanied the politics of national liberation. But without exception, they have been overtaken by the developmental state which has promised to end poverty and backwardness by adopting appropriate policies of economic growth and social reform. With varying degrees of success, and in some case of disastrous failure, the post-colonial states have deployed the latest governmental technologies to promote the well being of their populations, often prompted and aided by international and non-governmental organizations. In adopting these technical strategies of modernization and development, communities have often entered the field of knowledge about populations - as convenient descriptive categories for classifying groups of people into suitable targets for administrative, legal, economic or electoral policy. In many cases, classificatory criteria used by colonial governmental regimes have continued into the post-colonial era, shaping the forms of both political demands and developmental policy. Thus, caste and religion in India, ethnic groups in South-east Asia and tribes in Africa have remained the dominant criteria for identifying communities among the populations as objects of policy. So much so that a huge ethnographic survey recently undertaken by a government agency in India has actually identified and described a total of exactly 4,635 communities that are supposed to comprise the population of that country.

I am convinced that the attempt by modern governmental technologies to classify populations into determinate and enumerable communities is a telling sign of the poverty of modern social theory. It is a commonplace in the descriptive ethnography of the non-Western world to find that the community is contextually defined, that its boundaries are fuzzy, that a particular community identification does not exhaust the various layers of the selfhood of a person, that it makes little sense to ask a community member how many of them there are in the world. And yet, it is this contextuality and fuzziness that legal-administrative classifications and statistical techniques of enumeration must erase in order to make populations amenable to governmental policy. What is lost in the process is the richness of meaning and the strategic flexibility afforded by the cultural repertoire of a people to handle social differences. This is the loss that writers such as Ashis Nandy bemoan. As I have said before, contemporary technologies of government regard communities as so much demographic material, to be manipulated instrumentally. They are not objects of philosophical and moral inquiry. In theory, to put it, if I may, in a nutshell - capital and community are antithetical...

Partha Chatterjee, "Community in the East"
Economic and Political Weekly, February 7, 1998





"... The Indian city has re-emerged in public consciousness not as a new home from within the boundaries of which one has the privilege of surveying the ruins of one's other abandoned homes. It has re-emerged as the location of a homelessness forever trying to reconcile non-communitarian individualism and associated forms of freedom with communitarian responsibilities, freely or involuntarily born. Apparently, the city of the mind does not fear homelessness; it even celebrates homelessness. However, that merely camouflages the fear of a homelessness, which can be cured only by a home outside home. Literature and serious cinema handle this issue as an inner conflict that defines a crisis of personal identity. Popular cinema sees it as a playful oscillation between the private and the public, the familial and the neighbourly, the rustic and the urban. The mother who is not a real mother but is more than one, the friend who becomes a brother and dies to prove the point, the self-destructive urchin in love with a millionaire's daughter - in popular cinema, these are not merely anxiety-binding technologies of the self. They supply a cartography of a home away from home in a culture where homelessness, despair and the psychology of the outsider are all relatively new states of mind..."

Ashis Nandy, *An Ambiguous Journey to the City*

Tees Hazari

(tr. *That of the Thirty Thousand*)

Driving past the Inter State Bus Terminus one winter afternoon, Amirchand the old auto driver turned to me and said, "In the time which I can remember, this was a huge park where we all played, and rested ... And now we are passing Tees Hazari. Did you know that 30,000 people were killed here once?"

A friend of mine had only recently bemoaned to me the loss of 30,000 mango trees from Tees Hazari.

Today Tees Hazari contains the District Courts. Maybe 30,000 supplicate everyday.



CityScapes

Delhi 2000.

Pollution competes
with livelihoods.
Industries jostle against
farmsteads in the journey
towards progress.
And slums contend with
legality to create
the beautiful city.
The realities of these events
are less than evident.
They yield themselves
to divergent interpretations.
Their significance is
anchored in conflicting frames -
of chaos, rights,
mutuality and conflict.
Our mornings are greeted
by this cacophony
that refuses to offer
the comfort of consensus.

Welcome to our city.





Dislocating Delhi

A City in the 1990s

ADITYA NIGAM



Delhi in the 1990s may be described as a postcolonial city with a first-world desire. In part, this desire of the city-planners to make Delhi into another global metropolis, may be ascribed to the rapidly emerging 'new global order'. In a sense, what marks this new global order is the 'de-territorialization' of the third-world metropolis, a sundering of its ties with its national location and its integration into the network of a handful of global cities.¹ It is worth bearing in mind that the postcolonial city has been marked by a deep and organic connection with the village/countryside, which functions as its 'constitutive outside': what the city is, can only be understood with reference to the non-city, especially rural areas. For those who make their journey to the city, it represents the land of opportunity and promise, however much the realities of decaying urban existence may eventually work towards smashing that dream. Continuous in-migration to the metropolises from the villages has been a central feature of urban life here, especially in the decades after independence. However, what marks out the postcolonial city as separate from, say, a first world city is the fact that large sections of these populations streaming into the city have retained their connection with the countryside. If the countryside feeds the city, it is the city that, in the context of the continuing poverty of rural India, provides the basis for the 'money order economy' that operates in many parts of the country.

In Delhi, which has been one of the major centres where such job-seeking in-migration takes place, industrial employment went up by 300 per cent between 1970-71 and 1990-91. In the same period, the number of industrial units in the city went up from 26,000 to 93,000. In the mid-1990s, it was estimated that more than 200,000 people had migrated into the city in the past decade. (For details see, *The BS Reader*, special supplement, *Business Standard*, January 3, 1996). In 1996-97, the number of industrial units in the city stood at 1,26,000, with an employment of 11,36,000.

It was in order to deal with continuous pressures of in-migration that planners in the 1970s mooted the idea of developing a number of satellite or 'ring' towns around Delhi, which would provide employment opportunities to people. The idea of a larger National Capital Region (NCR) that included six districts of neighbouring Haryana, three districts of Uttar Pradesh and a part of Alwar district of Rajasthan, was formalized in the mid-1980s, with a separate planning board, in order to encourage industrial investment and development in the proposed magnet towns. The declared objective of the NCR planning board, in the early 1990s, was 'to deflect 20 lakh people' from coming into Delhi. Among the proposed ring towns were Meerut, Khurja, Rewari, Rohtak and Panipat. Poor infrastructural facilities like roads and availability of power saw to it that these remained mere dreams of the planners. In any case, till environmental concerns became pressing, it was Delhi that was the preferred location for new investment, thanks to its being the seat of power. The symbiosis between town and country, therefore continued to characterize Delhi's economic life. It is this symbiosis that is sought to be destroyed by the city planners by 'relocating the city' in the global network.

If Delhi has to be 'relocated' in this new grid of global cities, it must be subjected to major internal transformations. It has to also make way for the new kind of investment that is streaming in. In contrast to the smaller and almost primitive, industrial units that inhabited Delhi so far, there has been a big inflow of multinational investment in the 1990s.² In the 1990s, it was the multinationals like Sony, Samsung, Daewoo, Motorola and Nokia, which were moving into Delhi in a big way - apart from international banks, financial companies and fast food chains. To them, Delhi was also a favoured destination because of greater international connectivity, and better communications access. (For details see, "The New Delhi", *India Today*, Dec. 6, 1999). It is to cater to this new inflow of global capital that Delhi is being spruced up.

Delhi in the year 2000 presents a picture of hectic 'developmental' activity, with scores of flyovers of different shapes and sizes being constructed along the Ring Road and outer Ring Road that surround it, as well as in several other parts inside the city. Hotels, posh commercial complexes and shopping malls, displaying familiar signs of giant global chains that mark any first-world city, within and in suburbs like Gurgaon and parts of Noida, complete this picture of 'development'. It is however, a different kind of development from the one that had been thought of so far - a development that at least pretended to be for the poor. Simultaneously, Delhi has been witness to the mass displacement of the poor, particularly in the last four years. Since 1996, the flashpoint has been provided by the conflict around the relocation of polluting industrial units. Much of the conflict that has arisen around this issue, one can safely say, is because of the fact that the entire edge of the state's inter-

vention in this regard has been directed entirely against the poor. There has been no effort to see that the abysmal living and working conditions for workers is improved. On the contrary, the attempt is to simply move these units out of sight. A recent Urban Development Ministry estimate of the fallout of the closure of factories and mass displacement of workers believes that this will release 700 MW of power and 50 million gallons of water, alongside a reduction of 40 mgd of sewage disposal. One cannot help suspecting that it is precisely to make available these facilities for the new investors that the state seems to be moving with such frantic speed in the matter of relocating polluting units.

However, global integration provides only one of the immediate and most compelling grounds of this transformation. There is another, equally compelling and somewhat more internal ground that has been active in the thinking of the state elite, throughout the past decades. This is the desire to 'rationalize' city space and build a modern Delhi, with proper infrastructural facilities and a healthy environment. Even in the good old days of Nehruvian self-reliance and import-substituting industrialization, the impulse to make the city a prototype of the first-world city was a fundamental one. And yet, the state-elite had to wait till the imposition of Emergency by the Indira Gandhi government in 1976, for the slums of the poor to be demolished. In a certain sense, there was a recognition of the fact that the state was responsible for some alternative arrangement, before large-scale demolitions could begin. There was recognition that things had to move at 'our own pace'. The difference between then and now, however, is that now the pace is dictated by the pace of the global economy, that demands a virtual severance of ties with the national location. There is a certain frantic quality to the way the reconfiguring of urban space is being undertaken now - as if in a race where 'we' can ill afford to be 'left behind'.

In his discussion of the politics of public hygiene in eighteenth century France, Michel Foucault notes that this new regime of public health "entailed certain authoritarian medical interventions and controls" (Foucault 1980: 175). The most crucial aspect of this authoritarian project, remarks Foucault, was the control over urban space: "The disposition of various quarters, their humidity and exposure, the ventilation of the city as a whole, its sewage and drainage systems, the siting of abattoirs and cemeteries, the density of population... are decisive factors for the mortality and morbidity of the inhabitants" (Ibid.: 175).

Foucault's discussion, it is important to note, is situated within the overall practices of governmentality and the emergence of 'the population' as the object of its welfare functions. However authoritarian this bid of the modern state to control urban spaces, it is eventually carried out in the interests of the well-being of the inhabitants of the city - at least notionally. Foucault also points out that the real targets of the state's intervention in this regard are the "privileged breeding grounds of disease", like prisons, ships, harbour installations, where vagabonds, beggars and invalids mingle together.

The politics of urban spaces in a postcolonial city like Delhi, in the late twentieth and early twenty-first centuries, displays a certain resonance with the kind of medical interventions described by Foucault. There is no doubt that the early efforts at town planning in Delhi were all characterized by this fear of disease. The document prepared - by the Town and Country Planning Organization (TCPO) in the 1970s, implemented with an unprecedented brutality during the Emergency, and witnessed in the large-scale demolitions of urban slum -

was framed by this fear. It was the designation of these areas as 'plague spots' and 'dens of vice', that underlay the entire discourse of town planning. However, in the 1990s, unlike Foucault's Europe, the inhabitants of the city do not seem to matter. The targets of the state's intervention here have not merely been 'vagabonds', 'beggars' and 'invalids', but the working poor of the city.

It was the late eighties, and particularly the nineties, that saw the rapid restructuring of the city space. In this period, the concerns of health acquired a particularly elitist character, alongside a cynical disregard for the lives of the poor. If the earlier concern was with epidemics and diseases in the poorer settlements, however anti-poor the actual practice of those interventions, the more recent discourse on urban health and environment has been marked by the complete disappearance of the poor from the horizon of planners and jurists alike. As a recent Supreme Court order famously put it, the health of some is more important than the livelihood of others. If the demolitions of the 1970s at least provided alternative residential sites to the oustees, even if outside the city, the recent conflicts over the environment have been singularly unconcerned with any such matter.

It is interesting that the entire effort of the past decade and a half has been to cordon off the city from the poor. In the eighties, the political threat from 'terrorism' and a spate of bomb explosions in the capital, in the wake of the insurgency in Punjab, led to the cordoning off of New Delhi. In the late eighties, the Boat Club lawns were made inaccessible for public protest. Prior to that, it will be recalled, the Boat Club used to be the site for political rallies and demonstrations, thanks to its proximity to the Parliament and the ministries.

Through the 1980s, settlements of the poor were removed to the outskirts of the city, in areas far flung from their places of work. Much of the restructuring was of course done in accordance with the Master Plan of Delhi, drawn up in 1962 (MPD 62), with help from a team of the Ford Foundation. This Plan was based on an elaborate idea of 'zoning' wherein residential, commercial and industrial zones were spatially segregated. As it happens, the industrial zones provided for plots to house machines but had no provision for the workers who would be brought into these areas. Consequently, there was no way a mushrooming of 'illegal' squatter settlements and *jhuggi jhonpris* could be prevented. As a matter of fact, such mushrooming of 'illegal' or 'unauthorized' settlements has been an abiding feature of Delhi's growth in the past decades.³ What has happened as a result of this kind of expansion

is that settlements came up without any civic amenities like sewerage, water and electricity supply. It is such settlements that became the target of the first wave of relocation in the 1970s and '80s.

It is interesting that the entire effort of the past decade and a half has been to cordon off the city from the poor.

The idea behind the exercise, at the time of drawing up of MPD 62, was that it would have to be renewed every twenty years. The new plan should have been ready by 1982. However, as some critics have observed, instead, the run-up to that very year was to see the biggest violations of the MPD 62, as flyovers, hotels, stadia were built gearing the city for the Asian Games.⁴ It was only by 1986 that a revised Plan was passed and even that came into force in 1991. (Ibid) This plan is

referred to as the Delhi Master Plan 2001 (DMP 2001). It is important to note that the DMP 2001 already marked a serious shift away from the MPD 62, even in terms of the provisions that were made for space allocations for the poor. To take just one instance, while the MPD 62 considered a minimum of 80 sq. metres as the minimum space for the residential requirements for a single family of the poor, the later plan brought it down to a mere 25 sq. metres. In reality, often they are expected to make do with a mere 12.5 sq. metres per family.

It was practically in the interregnum between the two plans, when no Master Plan technically existed, that a case was filed with the Supreme Court, regarding the pollution of the river Yamuna. The second wave, that centres around the serious conflicts over pollution, came to the fore in 1996 as a consequence of this case. On 8 July, the Supreme Court passed its judgement on this 'public interest' litigation, filed by an 'environmentalist' lawyer, M.C. Mehta. Initially relating to the pollution of the waters of river Yamuna, the case extended to include the entire question of water and air pollution. In this judgement, the court decreed that 168 hazardous industries be 'relocated' i.e., shifted outside Delhi. In the 11 long years that the case had been pending, at no point of time were the workers employed in these industries (and clearly the worst affected in any case, relocation or no relocation) ever considered as affected parties, whose voice needed to be considered.

The judgement ordered the summary closure of the concerned industries by 30 November. Its argument was that since neither the employers nor the government had in this intervening period, cared to install Common Effluent Treatment Plants (CETPs), they must simply shut down the concerned units. The cavalier fashion in which the matter had been treated was evident the minute the judgement was sought to be implemented. For, it came in as a handy instrument for the owners who were in any case seeking to close down these units and put their money in more profitable businesses – many of the hazardous industries being sunset industries. It was only after an interlocutory petition was moved by the Home Minister of the then ruling United Front, that some modifications were made to the first judgement that made the closure option a bit more difficult for the owners.⁵ So, for instance, the judgement had provided that while about two thirds of the vacated land of these units would be taken over by the government to develop green 'lung spaces', the remaining one-third would be available to the employers for their use. It had also provided for the payment of a mere one year's wages to workers who decided not to take the relocation option. Both these options were unrelated to actual relocation. In other words, if the owners so decided, they could simply close down and get rid of the workers. The revised judgement of 4 December, however, linked the first question to actual relocation: the employers would be able to get their share only if they showed evidence of relocation. The compensation for workers was increased to the equivalent of six years' wages.

Following the havoc wrought by the judgement, a two year long movement was conducted under the auspices of *Delhi Janwadi Adhikar Manch* (DJAM), that was formed in December 1996, with the coming together of a number of smaller trade unions, democratic rights and other activist groups. The activities of the DJAM did manage to bring the issue into public debate by bringing in questions of urban planning and questioning the entire method of preparing Master Plans. The DJAM critiques also focussed on the very logic of

planning as embodied in the two Master Plans. More significantly, the intervention of the DJAM also succeeded in reorienting the terms of debate in a way that sought to transcend the dichotomy between environment and workers' rights that had been set up and within which the leading trade unions too sought to understand the question. Looked at from within that kind of framework, there was no possibility of addressing the problem of a clean environment itself as a question of workers' rights. The critiques made by the DJAM argued that there could be at least two ways of dealing with the question of pollution: one, that simply relocated pollution outside the elite's backyard, that is out of the precincts of the city; and the other, that recognized that the question was integral to the health of the workers who would have to nevertheless work in those units, irrespective of where they were located. The second approach required much more than a 'not-in-my-backyard' approach and a solution from that angle lay in clearly involving the workers in the very formulation of plans for a cleaner environment.

The problem with the 'not-in-my-backyard' approach is that it not only ignores the workers' relationship to pollution; equally, it ignores the health concerns of the populations in areas where pollution is sought to be relocated. In at least one such instance, the farmers of Bawana, an outlying village where some of the units are to be relocated, voiced their strong protest against such callousness with regard to their health concerns.

The movement initiated by DJAM, however, could only stall the second leg of displacements for a few years. In real tangible terms, it could not really prevent the relocation. A part of the problem was also because the major trade unions refused to take up the issue in anything but a ritual manner, and that too, only after the question became a matter of serious contention.

In the event, more than 50,000 workers along with their families were displaced. What happened to the industries and the workers who agreed to go to the new sites, in other states like Punjab, Rajasthan and Himachal Pradesh, is yet another painful story, but that cannot be gone into here. Subsequently, in November 2000, when the next round of industrial relocations began, this time enveloping a much larger segment of the city's population, Delhi almost came to a standstill.

This time round, the lead was taken by the small manufacturers associations. In the first bursts of violent protests, workers and employers joined hands in resisting this attack on their livelihoods. Considering that the net was cast much wider this time, it could not but affect big chunks of voters of every political party that mattered in the city. If the displacements in the first round affected only a 168 units, this time round practically all units in the polluting category as well as those in the 'non-conforming' areas were under attack. The category of units in the 'non-conforming areas' are basically units that are located in areas marked for residential purposes in the Master Plan. This includes a phenomenal number of registered and unregistered units working with less than ten workers – and often with only two or three. Many of them can be better described as slightly upgraded artisanal units. They function in almost all the pores of the city and in fact account for the subsistence of a phenomenal number of workers and small owners. Inclusion of these units in the ones slated for relocation meant that the lives of literally lakhs of workers would be adversely affected.

As the mainstream parties have jumped into the fray, the old terms of debate seem to

have been revived and populist rhetoric takes the place of a serious reconsideration of the problem of pollution. A strong opinion now being voiced by influential members of both the Congress and the Bharatiya Janata Party is that the Master Plan be so amended that the non-conforming units are excluded from the purview of the units to be relocated. While this can be a short term measure, the question of tackling the unhygienic and unhealthy living and working conditions of the poor remains. So does the larger question of the right over the city space, the allocation of which today follows an altogether different logic.

NOTES

- 1 The term 'global city' is being used here in an entirely descriptive sense and should not be confused with the term as it is used by urban theorists.
- 2 The relative size of investment may not be very big, but there is no doubt that it has been enough to transform the landscape of the city.
- 3 There is a complex dynamic that has operated in the coming into being of such settlements, the details of which cannot be gone into here. The dynamic involved the complex interplay of the politics of survival of the poor and the politics of patronage of the ruling Congress politicians.
- 4 See Dunu Roy, "Plan for the Masters", *The Hindustan Times*, Nov 24, 2000, p. 12
- 5 For greater details, see the report *The Order that Felled a City*, Delhi Janwadi Adhikar Manch, Delhi, 1997

Post-colonial towns called Deoria

SHAHID AMIN

Prologue

To live in today's Delhi is to breathe the absence of a rejuvenating culture. The language that walks the streets is of the *Humko Binnies Mangta*¹ variety, mauling the vernacular and replicating sans irony our colonial masters' compounding of *mangana* - demand and order with *chahana* - desire and affection. Our passions are ruled by copywriters, our early morning thinking conditioned increasingly by admen-columnists.

As identities are soldered in the fast-paced age of globalisation, everyday signs are no longer 'of the times', but products of familiar, outlandish climes. Unhinged from its immediate moorings, culture is now produced by distant sponsors. And so the *longue duree* of the present becomes the defining moment of a homogenising public culture, high and low. As that American whiskey advertisement on Indian TV had it: "Tradition? Tradition is not what it used to be".

Differences in wealth and sensibilities no doubt remain. The small-town *panwaris* (betel-leaf sellers), their long-legged kiosks located strategically beside electricity poles to better facilitate the wiping clean of paan-smeared fingers, do not relay the message of MTV as loudly as they did film songs and toothpaste ads from Radio Ceylon in the pre-1968 days before All India Radio went commercial. Cable television is not *de rigueur* with the betel-leaf sellers of the present century, but an incongruous 'Polo mint' poster displayed in the winter of 1995 on paan kiosks in U.P. small towns hinted at the shape of things to come. Huge hoardings went up in the new year trumpeting the arrival of paan-flavoured Polo mint to Hindustan, a land whose civilisational ambit was once memorably etched by a leading Medievalist in terms, inter alia, of a unisex betel-leaf culture.² *Fin de siecle* metropolitan India managed to ward off this culture-specific mint-savouring assault.

But just about. In the globalising India of today words as long as they are recognizably English need not be meaningful in their entirety and immediacy; they defer instead to a world of logos and brand names, with its flamboyant relationship to the here and now. In the district town of Bahraich, bordering Nepal, I recently saw a devotee enter the shrine of Syed Salar Masaud Ghazi (died 1034 A.D.), a hugely popular Muslim warrior saint of north India, wearing a jacket with the dreaded RDX emblazoned on it. A few miles away in the *gasba* of Hathile, home to the shrine of Salar Masaud's martyred nephew, a young lad flaunted a T-shirt with the difficult word 'vasectomy' screen-printed across his chest. One wonders whether there would be any takers, even 25 years after the excesses of the state of Emergency, for export-quality reject clothing with the Hindi cognate *nasbandi* embossed across them!

1

In times past, north Indian towns were not the receptacle of such free-floating signifiers.³ Both the cultural artefacts and the manufactures of pre-colonial and colonial Uttar Pradesh in Upper India were forged, to be sure, in its *qasbas* and larger towns. Agriculture claimed the countryside and the *tahsil* (lit. to collect), the land revenue; the *jhant sahib* (joint magistrate) ruled the sub-division and the Collector the district. Till 1947, the year of Independence, the district town was not what mattered the most in terms of the intellectual, industrial, or indeed propertied development; *zila* headquarters or *Sadr* stations as these towns were called, were largely the seats of colonial collections and imperial governance.

Not that district towns such as Badaun, Sultanpur, Azamgarh and Gorakhpur were rootless colonial outposts with only the Civil Lines and the District Jail, the Collector and the *kotwal* to commend for them. Highly popular compositions, both within and outside the Bombay film industry, of poets such as Shakeel Badauni, Majrooh Sultanpuri, Kaifi Azmi and Firaq Gorakhpuri testify eloquently to the cultural effervescence of these central and eastern U.P. towns where literary production, far from being parasitic on official patronage, was quite often in opposition to the will of the colonial masters. Several of these famous poets, their extended *nom de plume* serving as latitudinal markers so to speak of their U.P. identity, moved out of their districts to Bombay or Allahabad in the 1940s and 1950s. They left a cultural and intellectual void behind them that has been inadequately filled by the purveyors of Urdu and Hindi rhyme and by state-run district libraries devoid of books. As for the much vaunted *qasbas* - Amroha and Sandila, Malihabad and Rudauli, places which bring to mind the finer tastes (*nafasat*) of U.P., be it in films like Kamal Amrohi's *Pakeeza*, the *dasehri* mangoes of Malihabad or the couplets of the *muhajir* (émigré) poet Josh, languishing in the enervating oasis of Islamabad - by the late 1970s these organic smaller towns had lost their distinctive personality.

The *qasbas* have now been truly globalised. A carefully swept *imambara*, a functional old *kothi*, periodic assemblage of aspiring local poets, even the occasional production of local lore, legends and histories are poor substitutes for the lost world of the *qasbas*⁴ - a world that revolved round patriarchal landlords (*zamindars*), subordinate artisans and the cultivation of the finer arts of polite conversation and poetical craftsmanship, with aspiring versifiers submitting their first draft poems to an *ustad* for improvement and a final go ahead. What now distinguishes the *qasbas* from villages are dish antennas of cable operators and the ubiquitous STD/ISD telephone booths, offering direct-dial facilities to cash-earning towns in India and to relatives in the El Dorado of the Middle East and the Gulf.

Post-independence, a few new district towns came into being, and somehow even these began to matter. Deoria, tucked away in the north-eastern corner of the province, was one such *Sadr* station of a new district carved out from the sprawling Gorakhpur, if memory serves me right, in 1949; as children we were told that both electricity and the Collector came to Deoria in the same year. Strange and predictable are the ways of memory: our new district was officially sawed off from Gorakhpur in 1946, but it took some time to take shape. The town received its power supply very definitely in 1949, and it is the difference made to quotidian and civic life by the 60-watt GEC bulb that cast its shadow on the remembered inexactitude that of us Deoria-born midnight children.

Even in the mid-50's, a minion of the municipality would routinely clamber up a portable ladder, the sort that paid electoral publicists carry on bicycles for high-density poster warfare, to replenish and light the glass - encased oil-lamps stuck on bamboo poles at the head of the smaller lanes. We associated these light (*battis*) with the word 'public': such was our adolescent 'municipal' consciousness in an inadequately lit Deoria of the 1950s.

The other sign of the early maturity of Deoria town was the well-swept, red brick-and-tiled K. E. Higher Secondary School; the initials originally stood for King Edward VII, but by the early 1950s King Emperor had been reduced to his initials by a linguistic artifice of post-coloniality. The abbreviation, when rendered into the local language was meaningless, unless one chose to indigenise it as the Hindi word *kaee*, meaning not one but several. The singularity of that imperial school, one each for every dusty district, was lost on us first generation post-colonials, as we subordinated an historic nomenclature to the freedoms of juvenile word-play.

2

The town electrified, the Indian Collector moved into his official residence on *Kachahri* (Court) Road on a highway that made its way to Barhaji, the important riverine mart, and *teertha* on the banks of the river Saryu-Ghaghra. It was on and off this *pakki* (metalled) road that the Courts and the Magistrate's offices came up, giving rise to a *nai* (new) colony where the Police Lines, the District Hospital and bungalows for the bureaucrats were to get sited. The much older *tahsil* building, further away from the highway and towards the old town, faced the railway station. Outside the Collector Sahib's Bungalow, the sprawling compound carefully tended with wheat and cauliflowers, stood a whitewashed angular pillar which listed the exact distance to Calcutta and Madras, Delhi and Lucknow. Litigants making their way to the courts further down the road took as much notice of this long-distance milestone, as Mauryan peasants would have done of the Prakrit homiletics of *Devanampriya Priyadarshi*, King Ashoka, bill boarded on ancient Indian trade routes.

The district distance-marker stood for the fact that a large-sized *tahsil* town had attained administrative puberty. It was telling us - but we schoolchildren did not care - how far our Collector's bungalow was from each of the several significant towns and cities of independent India. A second-class *sadr* station loathed by the bureaucracy for its insalubrious climate was in the moment of its birth being imbricated with the nation and the state.

The metre gauge railway track however meant that Deoria did not have a direct line of access to those distant places which were on the broad gauge. Delhi or Aligarh meant a change at Lucknow's Charbagh station; Howrah and Bombay a switch at Banaras and Allahabad. For long, I, a Deoria-born, remained envious of a Sultanpur or a Bara Banki, which had higher platforms and king-size rail carriages. Our premier super-fast train - the Awadh-Tirhut Mail - which curled all the way up to Siliguri in distant Assam - was poor substitute, I felt, for the inadequate width of our railway track! It was only in the 80's when Deoria station got an uplift and a new set of broad rails that my sense of having been worsted personally in the 'battle of the gauges' diminished slowly. Even now, when I am told that my hometown is connected directly to Delhi-Bombay-Cochin, I am not quite prepared to believe it. Deoria *Sadr* has come a long way from the day that the PWD (Public Works Department) stuck that all-India phallic milestone outside the District Magistrate's bungalow.

3

As an old *tahsil* town, Deoria had a rudimentary armature of the colonial state well before it became the headquarters of a new district on the eve of Partition-Independence. Selected as the headquarters of a new administrative subdivision in 1905,⁵ this small-time centre place with a population of 2000+, well below the average big village, had already a specialized bureaucratic and mercantile leavening. "In addition to the *tahsil* buildings, Deoria contains the court-house and lock-up of the sub-divisional officer, the *munsif's* court, a registration office, a combined post and telegraph office, a dispensary, an inspection bungalow, an Anglo-vernacular school, an upper primary school, a school for girls and a cattle pound", noted the *District Gazetteer* in 1909. The *tahsil* and the sub-divisional courts had attracted a fair sprinkling of *mukhtars* and pleaders from the *qasba* of Machlishahr in Jaunpur, the long-settled locale of an important regional kingdom during the 14th-16th centuries. In its initial stages this was a forced migration to virgin areas in the same cultural zone in the aftermath of the Great Revolt of 1857. The locally dominant Brahmins and *Thakurs* supplied the bulk of the lawyers once the district courts became functional from the early 1950s.

The town was a leading retail centre of Manchester cloth; the advent of the railways in 1885 added further to the number and strength of mercantile-Marwari traders of Deoria. The older metalled road connecting the productive Kasia-Padrauna area in the northeast to the entrepot town Barhaj on the Ghaghra passed through the older bazaar and was "flanked by the shops of wealthy Marwari merchants" who had built a *dharamshala* in the town and a fine masonry tank - *Lacchi Ram ka Pokhra* - named after the main benefactor. The railway line while pushing the Marwari masonry tank on to the wrong side of the track, brought the traders in closer proximity to warehouse at the station. The modern bazaar now began literally at the mouth of the railway godown at the crossroads called *Rameshwar Lal ka Chauraha*, named after a prominent Marwari cloth merchant. By 1900s Deoria had emerged as the centre of the wholesale trade in cloth and cotton stuffs on the eastern section of the BNW railway line, between Banaras and Gorakhpur.⁶

Marwaris provided an important financial and social support to the cultural, linguistic and communitarian initiatives that reached Deoria from Banaras and Allahabad in the 1890s and early 1910s.⁷ The militant Cow Protection Leagues, the concerted (and successful) attempts to win for Devnagari Hindi the status of a language of the courts, the *Sewa Samitis* of the 1910s which ran Sanskrit *Pathshalas*, organized discourses on the *Bhagavad Geeta*, streamlined the organization of Hindu fairs and festivals - were funded largely by the Marwaris.⁸ Marwari wealth and charity both came wrapped in bolts of fine and coarse cloth. "*Eh Marwari, khola kewari, tohre ghar mein lugga sari*" ("Oh Marwari, open up, there are dhotis and saris stacked in your house") was an old rhyme that was perhaps thought up by those knocking at the doors of cloth-bound charity.

Manufacturing was marginal to the generation of wealth in Deoria. A major centre of indigenous sugar production, a *qasba* called Rampur, was just five miles away across the railway tracks on the Little Gandak that had connected it via the Ghaghra to the riverine corridor of upper India all the way down to Calcutta⁹. Deoria town was host neither to cotton weaving nor to the boiling down of cane juice into *desi* or indigenously made sugar.

The early 1930s saw the hurried erection of two sugar mills, one opposite the railway station, to the home market that the colonial government had created by slapping prohibitively high protective duties on foreign, notably Javan sugar. The station sugar factory, the Sindhi mill as it was called after those who had floated it, buying up second hand machinery, it was said, from a Java factory forced into liquidation by the loss of the India market, was well and truly 'sick'-and-dead by the late 1950s.¹⁰

4

The violence of Partition sent a few Punjabi refugees even to our part of India, 750 miles distant from the new-and-permanent western borders of 1947. Not that this was the first contact between *purabiyas* (easterners) and Punjabis. Another historic convulsion - the Great Rebellion of 1857 and its suppression - had brought east-U.P. peasants face to face with Sikh landholders from the Amritsar village of Majitha, on a sprawling estate which included the famous riot-torn town of Chauri Chaura, 15 miles west from Deoria¹¹. The Majithias turned out to be the improving landlords that Cornwallis (buried in Ghazipur) had dreamt of in Calcutta in 1793. They improved drainage and irrigation, cultivated sugarcane and set up a large sugar mill and a rum distillery.¹²

The Punjabi partition refugees that came to Deoria - the Nandas who graduated from selling bread and butter to a profitable photography business, Iqbal Singh who fast emerged as the most important 'general merchant', the Chopras who made their mark at the far end of the modern or *nauki* bazaar as fruiterers, and most importantly the Aroras, who by the 1960s had set up a cold storage and a truck transport network - all these migrants from and into a new nation impinged very directly on our district town. We bought our fruit from the Chopras, the youngest of whom gave private tuition to schoolboys of K.E., the Sewa Samiti and the Marwari School.

Iqbal Singh's store was the source of Eveready batteries for that novel contraption of the early 1960s - the National Panasonic two-band transistor that someone had gifted to me from America, and which was well worth it even if it could not catch Radio Ceylon on 25 metre band quite as well as that durable piece of acoustic furniture, the multi-valve, full-size Philips radio. Popular Hindi film music and catchy ad-jingles were banned on the austere All India Radio, and it was the Trade Department of Radio Ceylon, barely outside the 12 mile territorial waters of the Union of India, that had stepped into the breach to provide us first generation post-colonials with the short-wave joys of 'hit' Bombay film songs.

5

After the assassination of Indira Gandhi in late October 1984, the cane fields of the Majithias were set afire, and the shop of Iqbal Singh in Deoria bazaar looted. Both these Sikhs, one a notable agro-industrialist, the other a hard seller of Knight Queen mosquito repellent, Clinic anti-dandruff shampoo, Maggie 2-minute-noodles and TV-friendly Uncle Chips, suffered their losses and went back to their businesses, acutely aware of the violent pedagogy of majoritarian nationalism, 'Teach these minority bastards a lesson'. After 'the incidents of December 6 1992', or the 'martyrdom of the Babri mosque' (as the other perspective has it), the killings in Ayodhya, Surat and Bombay were to teach the same lesson to the puta-

tive descendants of the first Mughal emperor Babur in Deoria - through Distance Education, so to speak.

In November 1984 Deoria was as much a part of a hideous national vendetta as was Trilokpuri in trans-Jamuna Delhi. One wonders whether it was the transmission of the stilled visage of Indira Gandhi from Teen Murti House, the residence of independent India's first Prime Minister, that was solely responsible for that macabre unification of India, linking Patparganj where I live to Deoria Sadr, 520 miles distant, on a direct route over the Nizamuddin railway bridge to New Delhi, the capital of the nation.

NOTES

- 1 Literally, 'To me wants Binnie's potato chips!'
- 2 "On the fundamental unity of our country - the sacred land where the black gazelle graze and the munja grass grows and the paan-leaf is eaten... - there has been no difference between the Indian intelligentsia at any time." This was how Professor Mohammad Habib invoked an uncluttered idea of India on the morrow of independence and partition in his Presidential address to the Indian History Congress in December 1947. See *Politics and Society during the Early Medieval Period. Collected Works of Professor Mohammad Habib*, Vol.I, ed. K.A. Nizami (Aligarh/New Delhi, 1974), pp. 113-14.
- 3 For an evocative account of present-day small town north India, see *Butter Chicken in Ludhiana*, Pankaj Mishra.
- 4 For an excellent example of present-day qasba-based histories, see *Apni Yaaden, Rudauli ki Baaten*, Chaudhuri Syed Mohammad Ali (Rudauli, Bara Banki, 1977)
- 5 *Gorakhpur: A Gazetteer being Volume XXXI of the District Gazetteers of the United Provinces of Agra and Oudh*, compiled and edited by H.R. Nevill (Allahabad, second edn. 1929, first published, 1909), pp. 222-23.
- 6 See "Returns showing the outwards and inwards [rail freight] traffic on each station of Gorakhpur district from January 1885 to June 1889", App. iv/13 MS, *Gorakhpur Settlement Report*, 1889, District Records, Gorakhpur; Gazetteer of Gorakhpur, p. 22
- 7 For details see "Gandhi as Mahatma: Gorakhpur District, Eastern U.P., 1920-21", Shahid Amin, in Ranajit Guha ed., *Subaltern Studies*, iii (Delhi, 1984), pp. 7-14. For Allahabad and eastern U.P. more generally, see "Piety and Politics", C.A. Bayly, in John Gallagher, Gordon Johnson and Anil Seal eds., *Locality, Province and Nation* (Cambridge, 1973).
- 8 See letter by Shri Ram Rungta to the Gorakhpur weekly newspaper *Swadesh*, 19.9.1920, p. 8; *Swadesh*, 26.12.1920, pp. 11-12; *Swadesh*, 19.12.1920, p. 8.
- 9 For Rampur Karkhana, see *Sugarcane and Sugar in Gorakhpur: An Inquiry into Peasant Production for Capitalist Enterprise in Colonial India*, Shahid Amin (Delhi, 1984), pp.38, 38, 62, 81-4, 121-2.
- 10 *Sugarcane and Sugarcane in Gorakhpur*, Amin, ch. 4.
- 11 For the property revolution in these parts in the aftermath of 1857, see *Event, Metaphor, Memory: Chauri Chaura, 1922-1992*, Shahid Amin (Delhi & Berkeley, 1995), pp. 31; 136-37.
- 12 I discuss the Sikh Majithias as pioneer cane capitalists in my *Sugarcane and Sugar in Gorakhpur*, pp. 105-06; 131-3; 175-7; 222.

"Our" Media City

JEEBESH BAGCHI + RAVI SUNDARAM



The city exists as a series of doubles; it has official and hidden cultures, it is a real place and a site of imagination. Its elaborate network of streets, housing, public buildings, transport systems, parks, and shops is paralleled by a complex of attitudes, habits, customs, expectancies, and hopes that reside in us as urban subjects. We discover that urban 'reality' is not single but multiple, inside the city there is always an official city.

Ian Chambers

Popular Culture: the Metropolitan Experience

Our age is, in especial degree, the age of criticism, and to criticism everything must submit.

Kant

Preface to The Critique of Pure Reason

In many ways Sarai was an effort to think differently about the urban experience.

The 1990's transformed the city of Delhi through a series of shock-like flows: large scale migrations of working people to the region, the spatial expansion of housing colonies, and the new visibility of the houseless on the street. This was also the period of the new globalisation, which introduced an unending flow of commodities, new techniques of reproduction, and our own peculiar mediascape.

Far less than the shiny, seamless mediascape against whom a long line of cultural theorists from Adorno to Virilio inveighed against, "our" mediascape made its presence on the street. The newer forms of urban media included millions of pirate music cassettes, videocassettes and parlours, grey-ware for computers, a new sensibility of software. A large part of the imaginative expansion of the 1990s took place in thousands of local PCOs, cyber cafés, street education outlets, back-alley cassette factories, and large non-legal markets for cultural commodities: Nehru Place, Palika Bazaar, Lajpat Rai Market. These spaces were sleazy and dynamic, dispersed and effective, and reached out to those parts of the city where the distribution networks of the media empires failed to imagine.

This is the 'other' media city, which produced a host of new practitioners of media. Local videographers, PCO-DTP operators, the unstoppable re-producers of cassette culture, a whole new generation of young programmers who never went to the Indian Institutes of Technology, and who learnt new media through a combination of hacking, sharing knowledge with friends, and an occasional visit to the local 'technology institute'. This is the (largely non-legal) culture that made the great expansion of the new media in the 1990's possible, not the state and large industry.

Non-legality is a problem for those who rule the city, for it seems to be a generalised condition of urban experience in India. Small industry, artisan shops, hawkers, weekly street markets all supply the mass of the population, and are also the target of legal violence, displacement using the discourse of cleanliness and order. This is an old trope, stretching from the colonial times, only this time an IT/shopping mall imaginary is held out as the solution to our urban crisis. The problem for our elites is this - the street has a strange way of returning to the city: for others this phenomenon is a critical resource of hope.

This is a media city where ruin and desire, cruelty and possibility, sharp exploitation and the dreams of mobility, the magic of the commodity and new dream worlds of radical programmers all exist side by side.

And here is the problem. Every large-scale techno-cultural transformation has witnessed the paranoia of cultural and political elites. Witness the problems with the print-revolution, the telegraph and the cinema. Just as censorship rules and fear of sexual transgression marked the early phase of the print revolution, so it is with the new media in India. While the state pushes the media empires' vision of an IT utopia happily coexisting with censorship and control, the old cultural elites, battered by the crisis of ideologies: Marxism, secular nationalism and ideology-kritik view the new media both with threat and puzzlement. This is a passing phase, the cruelty of transition.

For our part, we want to take the 'other' media city seriously. Not through a spirit of positivity, of an old-style valorisation of 'resistance', or as a discrete space innocent of power. We want to do so through an engagement that is playful and critical, and reflexive and historical in our attempts. That is why Sarai's own programme brings together practitioners and scholars.

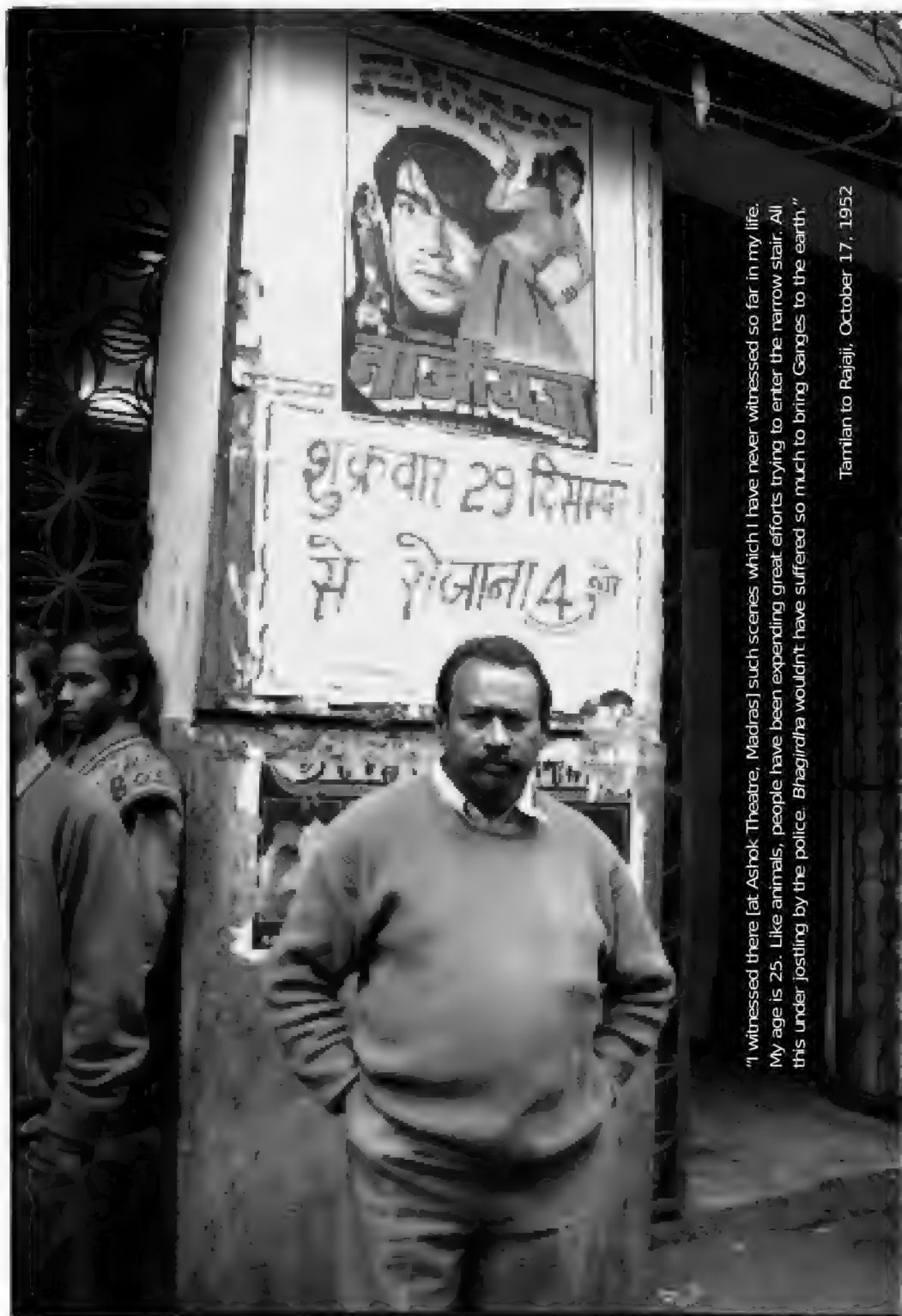
Our urban crisis is real. What is also real is that this narrative of the contemporary is only now beginning to unfold, a constellation that is forming.

To write a history of the present is not easy. We want to make a modest beginning by attempting to understand the practice of daily life in the city.

Old Media/New Media



Ongoing Histories



"I witnessed there [at Ashok Theatre, Madras] such scenes which I have never witnessed so far in my life. My age is 25. Like animals, people have been expending great efforts trying to enter the narrow stair. All this under jostling by the police. Bhagirdha wouldn't have suffered so much to bring Ganges to the earth."

Tamilan to Rajaji, October 17, 1952

An Imperfect Public

Cinema and citizenship in the 'third world'¹

RAVI S. VASUDEVAN

In this lecture I will be considering the issues of cinema and citizenship from the point of view of the cinema as an industrial form generating large-scale consumption. This could be called normal film experience, "in the sense of a cinema that is ordinary and widely available".² From the outset I should note that I have used the term Third World to outline certain general characteristics rather than provide a comparative, empirical account of these issues as they are played out in a number of countries, although, in the second part of this paper, I do look to the Indian context to flesh out my exploration of issues. The term Third World is used here to broadly address the circumstances of economically backward or underdeveloped societies, with vast problems of poverty and illiteracy. These societies are characterised by the maintenance of ostensibly traditional religious, familial and socially segmentary coordinates of identity, rather than the apparently transcendent individualist and contractual relations of advanced capitalist societies. Of course, the old concepts of the three worlds themselves require to be re-worked in the light of new, if recently shaky, developments of capitalism in the South East Asian region, and because of the fall into political, social and economic crisis of the former socialist countries of Eastern Europe. In turn, we need to reflect on how much some of the formulations for the Third World may speak to the circumstances of migrant, diasporic communities in the European and North American metropolis. Nevertheless, I hold onto the conceptual frame of a Third World society. If, in the course of time you will notice that by sleight of hand the Third World has by and large collapsed into India, I hope you will indulge the lapse and take it as a sign of respectful discretion about opinionating on cultures I do not know so well. In any case, I hope the issues remain pertinent.

Citizenship and cinema

There are two ways in which the category of the individual, one of the key terms in the discussion of citizenship, has been associated with the cinema. This is in the form of the Hollywood cinema, or what has come to be called classical narrative cinema, whether observable in Hollywood or as part of a more generalised practice. And also in the notion of an art cinema, attentive to a more reflective and interrogative relationship to individual perception. What needs to be emphasised is that these forms are historical and come into being at a certain time. They are not the transcendental indices of how stories should be told in cinema, or how spectators should be addressed. One of the issues I would like to highlight in this lecture are the parallel strands in film and political theory which would seek to question, or at least to complicate, any straightforward positing of the individuated spectator or the individual citizen as the inevitable or even the ideal figure of cultural and political life.

Civil society and political representation in the post-colonial situation

At this point I would like to show how the question of citizenship, of civil and political rights, has been conceptualised in recent Indian political theory. I draw here upon the work of Veena Das, Sudipta Kaviraj and Partha Chatterjee. While these writers cannot be collapsed into one view, and Veena Das presents a distinctive feminist voice, they have overlapping concerns. The most important of these, perhaps, is the sensitivity of these writers to the ways in which Indian people translated the modern concepts of social and political representation that emerged under colonial rule into distinct languages and paradigms of political selfhood.

The argument turns on the way modern civil society, and its characteristic discourses of representation, communication and discussion, tends to be the preserve of a small elite in colonial and post-colonial societies. For Kaviraj, this discourse is also specifically a language which undergoes translation when it comes into the vernacular discourse employed by colonial subjects, "Once [an idea like democracy] enters the vocabulary of colonial peoples and comes to figure in their imagination, these ideas sometimes displace other existing concepts, occasionally achieving startling osmosis with earlier prevalent ones. As these ideas are vernacularised, they become easily available to the ordinary political imagination. Their meanings, their implications and consequences begin to diverge significantly from the trajectories analysed within traditions of western theory".³

The vocabulary of the vernacular does not have room for the discourse of the individual citizen, in Kaviraj's opinion, "because of the insufficient spread of the social logic of *gesellschaft*".

In Indian society, despite the inroads modernity has made into traditional forms of communitarian bonding of people, the process of individuation has not remade the entire logic of the social world. Perception of disadvantage often tends to be more collective than individual, but collectivity itself is seen in a non-modern manner, as solidarities that are not interest based. Disadvantage is seen more as unjust treatment of whole communities, like lower castes, minority religious groups and tribal communities, which are thus seen as potential political actors for social equality. The principle of [people's] self-identifying action is not poverty but discrimination. And the relevant unit of social analysis is not the individual but the community.

Chatterjee has charted the colonial subjects' response to western modernity in ways similar to Kaviraj's, and employs the term 'political society' to encompass the forms of mobilization around collective identities. 'Political society' is composed of parties, movements, and non-party political formations. "The institutional forms of this emergent political society are still unclear. Just as there is a continuing attempt to order these institutions in the prescribed forms of liberal civil society, there is probably an even stronger tendency to strive for what are perceived to be democratic rights and entitlements by violating those institutional norms".⁴

I would suggest that the emphasis on collectivity and community in these positions, while pointing to real tensions in Indian systems of political representation, may not be adequately historical in their descriptions, and tend to an absolute, mutually exclusive relationship to western theories of civil society and individual interest. Historically, the drives

of collective or group identity were not put together in total independence of state initiatives. They drew on a different logic of representation instituted under colonial governance, one which continued under post-colonial regimes. Thus the personal law in India relating to property rights and inheritance has been governed by the post-colonial state's sensitivity to community practices, especially of religious community, preserving them against any universal codification for fear that this would be seen as an incursion into minority rights. Reservation of posts in government-run institutions to compensate for historic discriminations of caste has been another aspect of state policy. Such features are part of a different order, construction of social and political rights articulated by the state itself. Indeed state and civil society in India have been composed of a mixture of collective and individuated codes in civil and criminal law. Thus, while drawing attention to how Indian politics marks certain points of departure from western norms, by pitting collective and community based interests against state and civil society, these writers may have skirted the ways in which forms and institutions intermesh.

I would suggest that the dis-establishment of the individual and the citizen as crucial actors in these critical discussions of the patterning of Indian political forms tends to be prescriptive, framing a cultural and political agenda for how to constitute a democratic polity more attentive to the cognitive structures through which relations of subordination and marginality are experienced in India. This is noticeable again in Veena Das's critical and yet empathetic understanding of the discourse of community, which remains anti-statist in its premises. She has pointed out how the preservation of a community's rights to autonomy in the matter of personal law has proven highly problematic for women of the community denied right to property, inheritance and maintenance. However, she contests those who favour state legislative intervention to supplant community identity by that of the individuated subject. Instead, she argues that exchange and debate should be possible between communities, the community of women seeking to alter women's rights within religious community. While there is certainly no foreclosure in Das's argument of the right of the individual oppressed by community norms to exit from community, we may wonder if oppositional strategies have not been more multi-form, utilizing both the channels of government legislation and of courts of law, along with recourse to debates and mobilization within community, to gain their ends. In saying this, I do not mean to take away from the politically important insights that have emerged from these efforts to theorize differences between Indian political practices and western political theory. But I would suggest that these lie less in arguing for entirely different and mutually exclusive definitions of rights, than in attending to the specifics of the cultural and political discourse which fashion political institutions, representational practices and different forms of political activity.

State cultural policies and the film spectator

If we shift our consideration of political selfhood to the realm of cinema in post-colonial Indian society, we need to develop a resonating series of investigations as political theory is reframed through the spheres of state cultural policy, artistic and public discourses on film, and in the practice of the cinema. The ideal of the spectator as citizen in the classical sense occurs in the discourse of a film society/art cinema intelligentsia, and is even

invoked by people within the mainstream film industry. In the aesthetic framing of the discussion, the discourse emerges as part of a critique of existing commercial Indian films, highlighting the need for a realist observation which would capture the authentic idioms and rhythms of Indian life. The commercial cinemas of India, compendia of melodramatic narrative and comic and musical performance sequences, were especially targeted for a perceived derivativeness from the sensational aspects of the Hollywood cinema, and for their orientation to melodrama and action rather than drama and psychological and individual portraiture. This art cinema discourse was instituted by figures such as Satyajit Ray and Chidananda Das Gupta in the film society movement that started in 1947. Implicit in their agenda was the desire not only to make films but also to cultivate spectators who were attentive to the drama of the individual, the type so memorably incarnated in the Apu character of Ray's great trilogy. Ray's work in the 1950s was to produce images celebrating the romance of modernity while at the same time attending to a sense of loss in the passage of earlier, lush senses of the self, as in the evocation in *Jalsaghar/The Music Room* (1958) about a declining aristocrat's immersion in the world of classical music. Occasionally, Ray devoted himself to a fulsome, if not entirely self-confident critique of the continuing sway exercised by feudal authority and irrational and superstitious beliefs, as in *Devi/The Goddess* (1960).

In contrast, the political elite did not exhibit such a modernist outlook, or at least not for all art institutions. Thus, the cinema lags behind in the overall formation of national institutions of art: the National Gallery of Modern Art, the Lalit Kala, for painting, the Sangeet Natak Akademi, for dance and drama were all formed in the first years after Independence in 1947. In fact active state support for the cinema as an art institution followed on from the success of Ray's *Pather Panchali/Song of the Road* in 1955, a venture which only received support from the Bengal government in its last stages. There followed the setting up a Film and Television Institute of India in 1960 and the Film Finance Corporation shortly after, but the lag in institutional formation even for the needs of the art cinema indicates the ambivalence of the new state in this cultural field. This is even more pronounced in the case of the film industry as a whole. The government set up a film enquiry committee in 1951 to look at the problems faced by the industry and came up with recommendations to improve and systematize industrial conditions by reducing taxes, encouraging substantial capital investment and setting up technical institutions. However, except in the latter field, these other recommendations fell by the way side.

There is a definite sense here of how the political elite considered the commercial cinema to be an inadequate place to nurture a culture of citizenship, of the culturally authentic and the modern. Of course, one should stress that there was ambivalence in some sectors of this elite even around the question of the modern as a whole. Perhaps the lag we have noticed in the formation of national art institutions suggests the ambiguous position of the modern, mechanical apparatus of the cinema in contrast to the traditional arts. Thus S.B. Keskar, Minister for Information and Broadcasting in the post-Independence government, saw radio and cinema as vehicles of an already existing national or traditional culture. He thus reduced broadcasting time for what he perceived to be inauthentic film music on the national radio, insisting that it only be used for classical music. (The decision was sub-

sequently reversed when it was realised that state radio was losing out at peak service time to Radio Ceylon, which had taken over the broadcasting of film music). Keskar regularly invoked the Government's objective as one of taking over a patronal function in the arts. If there is a conception of citizenship here, then it is a restrictive one, focused on the need to reproduce a 'traditional' identity and the attributes of authenticity. Of course, the State's definition of Indian music was at variance with both modern popular audiences, and even, it may be argued, earlier popular traditions that were at a remove from the music patronised by the courts.

This is not to entirely discount the priority given to cultural tradition in state policies. For, as various writers have argued, a significant imperative in a post-colonial scenario is, if not the recovery, then the re-invention and re-connecting of cultural knowledge and memory suppressed or fetishized under colonial rule. Such suppression occurred through the new and culturally alienating processes of education that emerged under colonialism. More broadly, social identity and customary practices had acquired fixed and constraining connotations under the system of classifications developed for the needs of colonial governance.

Highlighting the political implications of cultural domination, Roy Armes has argued that colonial education ensured "that the colonized come to enjoy none of the attributes of citizenship". He goes on to a rather excessive discounting of nationalist attempts to introduce the standard institutions of democratic representation because of their western origin. Thus he notes, "The nationalist did not seek to revive a traditional form of society or to mobilize mass support for the independence movement in terms of ethnic identity - denigrated as 'tribalism' by the colonisers. Instead, their ambition was to create a modern state, using concepts of democracy, elections and political parties borrowed from the West. Even the underlying democratic definition of 'one man, one vote' conceals a concept of western origin: individualism".⁵

As we have observed, the arguments of recent Indian political theory are quite different. Rather than insist on an indigenist resistance to western categories, these writers have pointed to the importance of the translation and re-embedding of categories within evolving cognitive fields, and a complicated reconstruction of political identity. There is a democratic drive to self-determination involved here, which we could define as the freedom to determine the nature of the self, the coordinates of being, meaning and action. As Balibar points out, the question of the citizen is linked to his or her transcendence of the category of the subject, a figure literally subject to various forms of authority, of feudal lord, sacred power, monarchical rule and, indeed, the modern state as well. In this conception sovereignty must come to reside not in some external institution or hierarchically subordinating set of allegiances, but within the individual citizen. How the individual determines the cultural coordinates of her sovereignty has to be worked out in historical context. To entirely privilege fixed notions of cultural identity over their historically experienced adaptation to new concepts of political representation is somewhat naive. In the context of cinema, it could be argued that a certain form of the discourse of citizenship animates the resistance to the unilateral decision of the state and cultural elites to formulate the terms of acceptable national culture. In this sense, the tutelary forms of state cultural control advocated by

Keskar would go against the drives of self-determination associated with the discourse of citizenship.

Here, not only did the state and cultural elites regard the cultural choice of the consumer of the popular cinema as manipulable and inferior, they also argued for a policing of popular viewing practices through censorship policies. Paradoxically, while the cinematic institution was thus perceived to be culturally illegitimate, its popular appeal, its social reach, was acknowledged and presented a threat, or at least an impediment, to the cultivation of civil society. Awareness of the substantial constituency the cinema commanded resulted in the government taxing, regulating and seeking to make the cinema an instrument of state ideology. Huge entertainment taxes were levied. These varied from state government to state government, but could range from 25% to 40%, a factor which has for long been considered a serious disincentive to stable long term investment by legitimate financiers. Interestingly, in certain states a special tax was levied on cinema owners for the policing of the area surrounding the cinema - as if the cinema did not quite lie within the domain of civil society and the normal responsibilities of government.

Despite these strictures, the government was willing to fashion the popular cinematic institution into an instrument of its ideology. This was literally as a physical space, irrespective of its other contents, a space in which images were projected for a significant social congregation. Subjecting this space to its overarching design, the government enforced a compulsory block booking by all permanent theatres of documentary films made by its monopolistic organisation, the Films Division. The films dealt with subjects deemed the appropriate concern of new citizens: representations of traditional culture, nationalist hagiography, information about the various regions of India, the display of state developmental policies that aimed to transform the economy, the conditions of life, and, indeed, the character of its subjects. The spectator came into a space subject to state surveillance and extortionate financial exactions to view a stigmatised object; but they were, in the process, yoked to an official and normative imagining of nationhood.

While the independent Indian state has been supportive to an art cinema enterprise in terms of funding policies and institutional development, there are instances of other Third World governments supporting the cinema as an industry like any other. Within this less exclusive policy, a special emphasis has been placed on the art film, but not in a fashion where other practices are made illegitimate by the state. In political terms, this more expansive attitude suggests a notion of the cinema as part of the cultural process of forming a civil society, where its modes of story-telling and the types of subjectivity these address are not determined by government and cultural elites. Admittedly, overall there has been little success in this attempt. The one notable effort, 'Embrafilm' in Brazil, effectively opened the door to pornography in its bid to fill reserved screen time for the Brazilian industry. What exactly was hoped for by such institutional consolidation? At one level, the critics of Indian popular cinema hoped that the industry would be re-shaped according to the universal coordinates of film making, associated with Hollywood cinema but generalized to a substantial section of the western world. The desire for such a model is evidenced by the widespread, pan-Indian middle class approval - even by sections of the artistic intelligentsia - for the emergence of directors such as the Tamilian Mani Rathnam, who has displayed the skills

of Hollywood style film-making while maintaining the standard repertoire of attractions associated with popular cinema. We must assume that such approval derives from the project of transforming the spectator of commercial cinema through immersion in focused rather than distracted responses to story-telling, linear causality in narrative structures and psychological representation of characters - narrative dispositions which would enable the emergence of a more 'rational' and individually calibrated relationship to the world. Let me put this model aside for the moment, and look at the cinematic conventions Indian popular cinema's critics have believed to be such an impediment to the emergence of discourses of citizenship in the field of cinematic subjectivity.

The peculiarities of Indian film

Writings on various Third World cinematic experiences, for example Thailand⁶, Sri Lanka⁷, Egypt⁸, Brazil⁹, and Mexico¹⁰, suggest that the particular distracting quality of Indian popular cinema, heavily and not necessarily coherently punctuated by song, dance and comic scenes, is not entirely distinctive. I will come back to the issue of distraction in its implications for spectatorial dispositions after considering the broad representational formats and modes of address of Indian popular film as these cluster around the question of melodrama, systems of typage and forms of direct address.

We may observe in Indian cinema the lexicon of melodramatic features noticeable in European stage melodrama: a bipolar moral universe; non-psychological characterisation, character being externalised into codified gesture, bodily demeanour and facial expression; a narrative propensity to collapse familial and public functions; intimately related characters playing out the larger functions of public authority.

In terms of discourses of subjectivity and citizenship, Madhava Prasad¹¹ has recently argued that the recourse to such systems of typage and the lack of perceptual and psychological individuation plots exactly a scenario of subjection, and sees the popular film narrative as a socially symbolic one. Such a reading conceives popular narrative as a directly, almost transparently, political form. Here state has not emerged separate from forms of authority incarnated in the family. These are hierarchical and feudal forms emphasising privilege over merit, blood ties and loyalty over choice and contract. Popular cinema is then a narrative system dramatizing a pre-modern organisation of politics in a transitional colonial and post-colonial society. The non-individuation of characters is intelligible if they are seen as exemplary interdependent figures assigned their roles within an overarching system of authority. Like other critics, Prasad has linked this authority structure to an indigenous, Hindu religious code of the authoritative image, that of *darsana*, where power is reposed in the image rather than the viewer. For him, *darsanic* codes define a fixed field in which characters derive their status in relationship to a central ordering principle or authority figure. Even the distractive, disaggregated aspects of the popular film, such as comic functions, are seen within this orbit. Prasad situates the codes of physical comedy and typage associated with unheroic propensities and incompetence in romance in terms of the imagery of class and caste relations in Indian society.

For Prasad, non-individuation has its particular defining register in the lack of the representation of privacy in Indian cinema, a lack centred on the informal prohibition that has

developed around the kiss. Highlighted in conservative Indian discourses as sign of national virtue and purity, Prasad instead analyses the prohibition as a sign of the power of traditional patriarchies to oversee and constrain the emergence of the conjugal domain and the nuclear unit. Such a pre-emption of a crucial condition for the creation of individualism and civil society implies the subordination of the modern state to a decentred system of feudalised authority. Prasad's outline of the popular Indian cinema does not, on the other hand, simply withhold or deny the possibility of spectator-citizens in Third World contexts. He argues that various tracks of subjectivity are in play in the popular film, the pre-modern form co-existing with other drives and desires centred on conjugal romance and consumerist fantasy.

Contrary to this framework, and arising out of a formal analysis I have undertaken of the popular Bombay cinema, it can be argued that the filmic techniques of individuated character perception are very much in place, if intermittently and, sometimes deceptively. Such articulations work, at certain decisive periods, to aid differentiation of state from a network of traditional patriarchal enclaves. Here filmic techniques of intimacy are observable, for example in the ways shot-reverse-shot and communication through sound and musical address is used to carve out a private space within a hierarchically coded public sphere. Now, while this in a sense qualifies the argument, I would suggest that many of its digits are still in place, but that we could benefit from unpacking them and re-framing them within some of the parameters set by political theory.

We would then arrive at a very suggestive area of tension in Prasad's analysis. Do the patterns of non-individuation speak of the retracing of the contours of a traditional and extensive patriarchy and its prohibitions; or do they also speak to a desired continuity of the filmic subject with community? There is, for instance, the narrative function of comic plebeian figures who have this unerring habit of interrupting moments of intimacy. Here the prohibition would not be an authoritarian one, but rather a playful opportunity to arrest that withdrawing of the couple from society under the sign of the kiss. Of course, and this Veena Das forcefully reminds us, community may itself be riven with hierarchy centred on gendered authority. Thus we have not only one type of symbolic communication to the audience through direct address, but several: authoritarian in the univocal look of patriarch as he balefully allocates rank within the world of the fiction, communitarian in the systems of play contrived by comedic instances. And the shifting modes of engagement of performance sequences are by turns celebratory and controlling, as in the way a rather dark image surfaces in the gaze of the male community as it envelops the female performer, a staple item of popular film attractions at least since the end of the 1950s.

What is evidently required here are precisions of the larger argument about the relationship between screen practices and audience histories. The induction of an address to audiences into screen practice is not by itself distinctive. As Thomas Elsaesser puts it, "The fact that in early cinema the films imagined their audiences to be physically present, while in the later, narrative full-length feature film, it was precisely the imaginary viewpoint of the spectator, his or her virtual presence in the representation that became the norm, indicates that what is contrasted is not theatre and cinema, but one kind of cinema with another kind of cinema".

What is distinctive is the continuation of this imaginary communication between screen and audience in the longer history of Indian popular cinema. Here, emergent work around the exhibition context will be important to understand shorter patterns in the relationship. In the Indian case, fan cultures have been an important source of investigation for the way screen practice must take note of audience orientations. The work of S.V. Srinivas¹² on the fan clubs of the Telugu star, Chiranjeevi indicates how fans lobby to control the star image, exercising a pressure which necessitates the star to publicly reassure them that he will conform to their expectations. Screen practice and star discourse may come to be articulated with politics directly, as happened in Andhra and Tamil Nadu in India where stars came into public office, and so brought the fans as agents into very domain of political representation. However, it is more common that the cinema functions as a crucial cultural space for the public articulation of subordinate group interests, one relegated to the shadows of social and political life. Here the realm of cinematic exhibition may power forth various subordinated struggles of marginal and impassioned groups, contests that pepper the urban geography in a territorial and often violent engagement of subaltern groups with cinema owners and police over the control of the cinema.

While retaining a notion of the hierarchical field within which senses of the self are constructed, once we have loosened the terms on which the popular film form symbolises society, then we may also consider the regime of attractions it combines as sites of play with hierarchy rather than straightforward instruments for the relaying of hierarchy. Most care seems to be required in the examination of the relationship between character representation and systems of typage, i.e. the employment of a recurrent, relatively fixed set of attributes to define character. This issue bridges drives within representation between (i) character verisimilitude, (ii) character as emblematic figure, a figure scaled upwards in terms of the significance and the manner of his or her discourse, and (iii) performative articulation of character according to a stereotypical regime of sociological, sartorial and character attributes. However, even the regime of the social stereotype can produce counter-vailing tendencies. Thus in cinema, the fixing of the attributes of religious community for Muslims and Christians rather than the privileged majority of the Hindus in India, while functioning within a symbolic hierarchy, can also act as a source of pressure on that hierarchy when manipulated by asymmetrical hierarchies of star discourse. The key Bombay film star, Amitabh Bachchan, is a case in point. He could assume Muslim and Christian roles, as in *Coolie* (Manmohan Desai, 1983) and *Amar, Akbar, Anthony* (Manmohan Desai, 1977), but his commanding position in the star hierarchy put pressure on the regime of social representation which would subordinate such figures within the film.

Here we may observe something of the shifting terms of subjectivity within film, which of course sit only quite schematically with the parallel political categories we have referred to. Notably missing in any collective or group identity referred to by the cinema is that of caste. Films tend to avoid this category to avoid controversy and ensure the widest possible reach, but also, perhaps, to tacitly invoke the upper caste figure as the normative one. In some recent instances, this has been quite explicit. Nevertheless, the formation of relatively inflexible community categories, echo, in however distortive and caricatural a way, the long-term crystallization of group claims within democratic politics.

Amongst these forms of character representation, the most interesting is that of the emblematic character. Here, in a way quite distinct from the realistic character and the typed character, there is the emergence into view, at a symbolically charged public site, often the law court, of a figure who will carry a discourse that tends to critique hierarchical forms on the terrain of the state and insists on a different set of claims on it. Here, in a way quite different from Prasad's reference to the residual gesture to the audience via a look, there is a fuller, sustained address, perhaps mediated by an audience internal to the fiction, but an address nevertheless to us. Here the popular film exercises a direct political compact with the cinema audience, rather than an indirect one. We may observe this as a drive to crystallise a new sense of community identity in the audience, as happened in the Tamil cinema of south India which sought to forge an anti-Brahmin identity; or more broadly a democratic address that brings it close to the desire to constitute an un-hierarchical, individual humanist society. But even if it is the latter, it is articulated as a work not of character driven narration but of condensation, a condensation on to a figure of the demands of and for community. The individual always stands for something, does not just stand for him or herself; here, too, one can see a junction between the articulation of individual and group claims.

Conclusion

In short, there is nothing wrong with the importation of the contaminated western concept of the individual vote. For the sake of God, community or individual - let the individual decide what defines his or her selfhood - we should hang on to this colonial legacy, whatever the misgivings of well intentioned cultural critics. On average India has had a reasonably good, 55-60% turnout at the hustings. If there is nothing wrong with the capacity of the Indian people to exercise their democratic rights at election times, they show a brutal capacity to withhold a mandate to 80% of films released in the market. My exercise here has not been to defend or promote the commercial Indian cinema, an often very troubled and troubling commodity, but rather to suggest the need to reckon with the distinctive way the domain of popular film spectatorship articulates a cultural and political subjectivity, and the need to formulate policies and practices to shape it in as creative a way as possible.

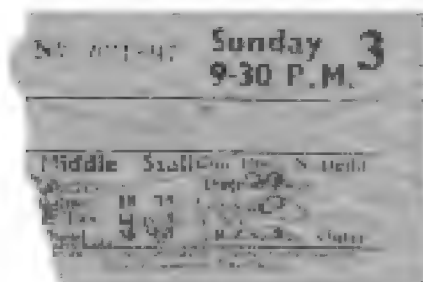
Julio Garcia Espinosa, the theorist of a 'third cinema' practice pitted against large-scale industrial forms, generated a utopian image of a cinema that refused to duplicate the perfection achieved by the US cinema. For Espinosa, the cinema of his imagination would instead remain imperfect, rejecting the division between producer and spectator that had fashioned north American movies into objects perfected for a market of passive spectators. Espinosa argued that we could hardly discount such a vision as impractical or utopian, because we do not know the potentials of technology for mass involvement in the creative process¹³. I do not want to tarnish that very beautiful image in the least. But, at the moment, I am left with my own rather ramshackle version of it. For the imperfection of the cinema I have discussed lies in its 'failure' to exorcise the ghost of the spectator from its spectral space. This is a screen that speaks to its audience, often in ways that engage us in a purposeful political address and a raucous fabrication of community. It is a significant space, I would suggest, to think about the productive imperfection of political subjects.

NOTES

- 1 This is a condensed version of the Van Zelst Lecture on Communication delivered at Northwestern University, Evanston in 1998.
- 2 *A second life: German Cinema's First Decade*, Thomas Elsaesser, Amsterdam, Amsterdam University Press, 1996
- 3 "Democracy and Development in India", Sudipta Kaviraj, in Amiya Bagchi (ed) *Democracy and Development*, London, St. Martin's Press, 1995.
"Dilemmas of democratic development in India" in Adrian Leftwich (ed) *Democracy and Development: Theory and Practice*, Oxford, Polity Press, 1996.
- 4 "Beyond the nation? Or within?", Partha Chatterjee, *Economic and Political Weekly*, Delhi, January 4-11, 1997, pp. 30-34.
- 5 *Third World Filmmaking and the West*, Roy Ames, Berkeley, University of California Press, 1987
- 6 "Of genres and savours in Thai film", Gerard Fouquet, *Cinemaya* 6, New Delhi, 1989-90, pp. 4-9
- 7 "Sri Lankan Family Melodrama: a Cinema of Primitive Attractions", Laleen Jayamanne, *Screen* 33 (2), 1992, pp. 145-53.
- 8 "The 'New Egyptian cinema'", Lisbeth Malkmus, *Cineaste*, 16 (3), 1998, pp. 30-31
Michael J. Martin, *New Latin American Cinema*, Detroit, Wayne Street University Press, 1997, Two Volumes.
- 9 *Brazilian Cinema*, ed. Randal Johnson and Robert Stam New York, Columbia University Press, 1995, Introduction.
- 10 "Tears and Desire: Women and Melodrama in the 'Old' Mexican Cinema", Ana M. Lopez, in John King, Ana M. Lopez and Manuel Alvarodo, ed, *Mediating Two worlds: Cinematic Encounters in the Americas*, London, British Film Institute, 1993.
- 11 *Ideology of the Hindi Film: A Historical Reconstruction*, Madhava Prasad, Delhi, Oxford University Press, 1998.
- 12 "Devotion and Defiance in Fan Activity", SV Srinivas, *Journal of Arts and Ideas*, 29, 1996, republished in Ravi Vasudevan (ed.), *Making Meaning in Indian Cinema*, Delhi, Oxford University Press, 2000.
- 13 "For an Imperfect Cinema", Julia Garcia Espinosa, in Michael J. Martin, *New Latin American Cinema*, Vol.I, pp. 71-82.

Table 1.1
A comparative sensorium study of four (4) Delhi cinema halls

	PVR Anupam	Delite (pr. Day-leet)	RadhuPalace	Swarn Talkies
Food	paper coke and hot buttered popcorn	potato burger and cold coffee	fried dal and pep-see	bread-omelette, unbuttered popcorn, peanuts, pakoras, aloo-chaat, veg rolls, and hot tea
Smell	hot buttered popcorn and whiffs of passing perfumes	frying oil and stale air freshener	sweat and stale food	fresh food, fresh tea, fresh piss
Temperature	cold, airless	air cooled to comfort, but the condensation sticks	hot when the fan is on, hot when it isn't	slow warm rising damp
Sound	dolby surround, cell phone and babalog	song and dance, yawns and loose change	concerto for projector noise, bat squeak and lata mangeskar	whistle, wah-wah, shuffle, yell, yodel, rustle, stamp and groan



On Mushtaq Gazdar's 'History of Pakistani Cinema'

REHAN ANSARI

There are no history books worth the name in Pakistan. Kids encounter Pakistan Studies as a compulsory subject and the text given in class to cover the last 50 years makes little mention of facts, pleasant and unpleasant. For example, Ayub Khan and his cabinet's relationship with the 1965 war, the MRD movement, and the MQM. As for the presentation of the pre-47 facts: imagine PTV covering Muhammad Bin Qasim's invasion of Sindh, and the PTV reporter solemnly reporting from MBQ's press releases.

Again, there is not a single book on the history of Pakistani existence for the use of the general reader and school going kids. In this history-forsaken land the late Mushtaq Gazdar's book, *The History of Pakistani Cinema 1947-1997*, arrived in 1997.

At Mushtaq Gazdar's recent passing away most writers remembered him as a documentary filmmaker and a fine man. Many people remember him a man who was particularly good to the young. People who have never met him will forever know that from the history book that Mushtaq Gazdar has written.

In writing about Pakistan cinema Mushtaq Gazdar has written a history of the land's culture and the times. Reading this book one cannot separate Pakistani cinema history from, well, history. In reading history thus the subject is no longer the monopoly of regimes. Gazdar shows the cultural processes behind major events. And he tracks these processes through the work, the voice and career of the individual.

An example of the breath-giving freshness of this approach: mention *Maula Jat*, the biggest block-buster of Punjabi cinema (the film established a strangle-hold on the industry for over a decade with its too-successful formula) and all polite conversation ends. But Gazdar gives a first-rate literary analysis of *Maula Jat* against the backdrop of Zia's Martial Law and Bhutto's trial and hanging. The film came out on the eve of the final act of the Zia-Bhutto drama. It's villain, Nuri (played by Mustufa Qureishi) is soft-spoken, polite and wants total power (anyone remember Zia on PTV promising elections, accountability, summary military justice?). The film was a great hit in Punjab and rural Sindh, the Bhutto constituencies.

In five chapters (there are six altogether), one for each decade of Pakistani film making, everything post-'47 is here. Explaining films and following the careers of film makers, Gazdar hits all our historical potholes, from partition through Ayub Khan and his Ministry of Information's Goebbels-like cultural policies (Gazdar's term), 1971 and the rise and fall of Bhutto, and Zia's long martial law, Islamization, and Motion Picture Ordinance. But Gazdar's eyes are firmly on the lives and careers of the directors, the music directors, the lyricists, the actors and producers, and the challenges facing the industry in Lahore, Karachi and

Dacca. We do not get a litany of 'great' leaders and events, but in reading the changes in cinema and culture we get a first-class perspective of the millstones around the nation's neck.

Considering the careers of film people of the generation of Shaukat Hussain Rizvi (director of *Jugnu*, the Dilip Kumar/Noor Jehan starrer, Ghulam Haider (music director who gave Madam Noor Jehan, Shamshad Begum, Lata Mangeshkar and Mohammed Rafi (!) their first major breaks), W.Z Ahmed (producer who owned Shalimar studios at Pune), and Noor Jehan, Gazdar cannot but help look at their individual relationship with partition. For most of these people their careers were cut in half.

Liberal people like W.Z Ahmed, whose film *Roohi* was the first film banned by the censor board for left-leaning sympathies, led the movement to ban Indian films here. It is an evergreen perspective on cross border trade: Indian films were coming into their own, Dilip Kumar, Raj Kapoor, Madhubala, Nargis et al were all stars on the rise whereas the Pakistani film makers had literally left their careers behind. The latter wanted to close the doors to Indian films so that they would not have to compete. The result: a lot of imitation and declining standards. Rizvi and Ahmed's output soon came to a standstill. For Madam Noor Jehan, of course, nothing, not even partition, stood in the way.

The book says little about how those, who had to leave Lahore after partition, fared in the Indian cinema business. There is one complete story. Quetta-born Roop K Shorey inherited Kamla Movietone in Lahore. He produced the Punjabi block-buster of 1943, *Mangti* (with an all Lahori cast), and left for Bombay in 1947 when his studio was burnt down by a Lahori mob. In 1951 he produced a block-buster with his film-star wife Meena (the *lara lappa* girl) *Ek Thi Larki*. In 1955 the couple came to Lahore to make the film *Miss 56*. Meera, overcome by the attention given to her by Lahoris, as opposed to Bombaywallahs, decided to stay back. Writes Gazdar, "heart-broken Roop had to take another trip from Lahore, empty-handed... (in the) first losing his livelihood, and then his sweetheart. (He) was never the same man again... and she died a pauper in 1989".

Everything pre-national is here too and that is the first chapter. Here Pakistani readers are finally allowed knowledge of the many lands and many centuries that lie buried beneath our present culture.

So how does Gazdar write a pre-national history of Pakistani cinema when the crippling problem that writers writing Pakistani history face is the problem of beginnings? How do you start talking about things Pakistani if you don't want to admit that once we were Indian?

The question of beginnings makes us anxious because it involves complex questions of identity. If we were Indian why (and when) are we not? Whereas the state monumentally organizes itself around the we-are-anything-but-Indian mantra through its media, foreign policy and military budget, the Pakistani public has welcomed the superiority of the Indian television channels. Recently overheard: a media *seth* in Lahore told a representative of a multinational advertising agency that Pakistani viewers hooked to satellite are 15% going on 100%.

Gazdar's finesse: the history of cinema in Pakistan is really the history of cinema of Lahore. And Lahore, everybody well understands, has always been around. This allows him to embrace the history of cinema in the sub-continent in writing about Pakistan cinema. The

link between the Mumbai and Lahore industries was intimate from the earliest years of cinema in the region (now it is unrequited - our media seth goes to Dubai to watch Indian films on a cinema screen).

"Artists and technicians who made it good in Lahore were invariably attracted to Bombay", says Gazdar. A.R Kardar for example, belonged to a landed Punjabi family, lead the Bhatti Gate Group of intellectuals, made silent films in Lahore but eventually settled in Bombay. There he made *Sharda*, *Dulari*, *Dillagi*, *Shahjehan* and *Jadoo* (all famous for Naushad's music as well).

Though In 1935 the first Punjabi film, *Pind di Kuri*, was produced not in Lahore but in Calcutta, the relationship between Lahore and the other film centres was not one way. "Bombay had technical superiority but when sound came to film the technical dominance of Bombay had to contend with the cultural dominance of Lahore. For now a well-written story, dialogues and lyrics became indispensable".

In the first chapter Gazdar moves beyond the national histories. He goes back pre-nation state and gives his understanding of the literary theory of Kautilya Chanakya (the writer of *Arthashastra* from the Mauryan era), the aristocratic attitudes towards art of Akbar and the Mughals, as well as the relationship to art of the courtiers, tradespeople and the peasants over the centuries. From this art history that Gazdar builds up, he speculates about the reason music is so central to film, the infallibility of our filmi heroes (the Krishna legacy) and how Muslim rulers, including the Khiljis, Tughlaqs, Sayyids, and Lodhis, all patronized the arts for strategic reasons: to keep orthodox elements at bay.

Gazdar's reading of cinema, culture and history is provocative because it works. How else does one explain Pakistani cinema's sudden ugliness in the late '70s and '80s. Screens teemed with murder, rape and pillage. As if someone had thrown a switch. It was the beginning of a cruel martial law and cultural atrophy, where with the general bloodying his hands in the Afghan crisis and guns and drugs flooding Pakistan, we became brutal as never before. No wonder *Maula Jat* occurred at the beginning of the decade, and hundreds of its clones thereafter.

The wonderful thing about Gazdar is that he is an optimist talking about a brave industry. He writes about recent releases with genuine excitement. And he has brought to attention some genuine nuggets from the recent past. Rangeela's 1979 hit *Aurat Raaj* is one of them. It is a gender-bender: a women's party wins an election and decrees that men shall wear confining dresses, rear children, and perform house-work. All the top macho film stars of the day worked in the film and did their bit.

What a brave town Lahore turns out to be in the book! The city keeps producing cinema. There is a 50% rise in the production of Urdu films between '94 and '96 despite stifling cultural policies and a culture that has not recovered from the 80's. No matter which general or minister has organized conferences in the name of the betterment of the industry, the filmmakers keep working.

Mushtaq Gazdar's book holds to an elegiac tone and a straight-backed optimism (hard to be both!) and is a wonderful tribute to Lahore. The enterprise of writing a cultural history - the labor in this book, its thorough readability shows - a rare caring about the young of this country.

Who's afraid of radio in India?

FREDERICK NORONHA

We claim to be the world's largest democracy, but fear opening up the airwaves to the commonman. Our democratic traditions are far stronger, yet countries like Nepal, Sri Lanka and perhaps even Bangladesh are edging past us in making radio relevant to their citizens. India's reluctant march towards democratising radio indeed makes the intentions of its rulers suspect.

Broadcasting in India is speedily shifting its profile. Indian radio is currently changing from being a government monopoly to highly-commercialized broadcasting. But this media needs to be democratized too. Privatization and total deregulation will not mean much to the average citizen if radio fails to get a chance to play a vital role in their lives. India has so far clearly given step-motherly treatment to public service, community, educational and development broadcast networks.

Over five years back, the Indian supreme court gave an interesting ruling. This judgement strongly critiqued the long - held government monopoly over broadcasting in this country. In early 1995, the court declared the airwaves as public property, to be utilized for promoting public good and ventilating plurality of views, opinions and ideas (AIR 1995 Supreme Court 1236).

This judgment held that the 'freedom of speech and expression' guaranteed by Article 19(1)(a) of the Indian Constitution includes the right to acquire and disseminate information. And, in turn, the right to disseminate includes the right to communicate through any media: print, electronic or audio-visual. "The fundamental rights", said the judgement, "can be limited only by reasonable restrictions under a law made for the purpose ... The burden is on the authority to justify the restrictions. Public order is not the same thing as public safety and hence no restrictions can be placed on the right to freedom of speech and expression on the ground that public safety is endangered".

This judgement rightly noted that Indian broadcasting was being governed by archaic laws. The Indian Telegraph Act of 1885 was meant for a different purpose altogether. When it was enacted, there was neither radio nor television, but both these concepts were later sought to be fitted into the definition of 'telegraph'.

In view of this, the judges said it was essential that the Indian Parliament "steps in soon to fill the void by enacting a law or laws, as the case may be, governing the broadcast media, i.e. both radio and television". Also, the judges instructed the Indian federal government to "take immediate steps to establish an independent autonomous public authority representative of all sections and interests in the society to control and regulate the use of the airwaves".

What has the official response been?

Reluctantly, the state-controlled broadcaster All India Radio (AIR) was given some level of 'autonomy'. For the most part, this meant that the organisation would have to concentrate on earning revenues, and foot a growing part of its own bill. Further, Indian radio broadcasting is right now shifting from being a government monopoly to highly-commercialized broadcasting. In mid-November 1999, the government announced that the bidding process to set up 140 FM (frequency modulation) stations in 40 cities had closed to 'overwhelming response', with 349 potential broadcasters finally left in the race for a license. Questions were, however, asked as to who was given a chance to enter this race, and how much publicity had been in fact accorded to the move to privatise radio broadcasting.

By early August 2000, it was announced that some 26 companies have received letters of intent, from the Indian government, after bidding to set up FM radio stations in 40 Indian cities. Three companies were not given letters 'as clearance had not come from the Home Ministry', as the news reports put it.

But how open is open? Can the diversity of the country of one billion be reflected by a little over two dozen companies, who will be broadcasting mainly entertainment programmes from cities across urban India?

For decades, India's radio stations have been centralized, government-controlled, over-dependent on relays and lacking in editorial independence. In recent years, a small number of citizens' groups across India have been pushing for something very different, through the community radio model. If the government is really serious about freeing broadcasting from state monopoly, then it needs to proceed to its logical conclusion by expanding the available media space and permitting communities and organizations representing them to run their own radio stations. A truly people's radio should perceive listeners not only as receivers and consumers, but also as active citizens and creative producers of media content. Community radio should have three key aspects: non-profit making, community ownership and management, and community participation. It is distinguished by its limited local reach, low-power transmission, and programming content that reflects the educational, developmental and cultural needs of the specific community it serves.

What we need now are dedicated frequencies, earmarked for the creation, maintenance and expansion of community broadcasting. Although permission for low-cost community radio has long been on the cards, the rules for setting up non-profit stations are yet to be framed. However, dozens of FM (Frequency Modulation) radio stations are currently being set up by the private sector.

Non-profit and development organisations have been lobbying for more than five years to get permission to broadcast information that could help the 'information poor' to get an understanding of issues critical to their lives. Recently, neighbouring countries like Nepal and Sri Lanka edged past India by allowing non-profit community radios to be set up. Asian countries like the Philippines have already shown the beneficial impact of such locally-managed, non-profit initiatives taken up by citizens themselves.

Nepal's Radio Sagarmatha, run by a body of environmental journalists, has attracted attention globally for its unique style of operation in a subcontinent where radio has so far been tightly government-controlled. Despite an unhelpful attitude by the government, it has

managed to promote information-based and green messages. "In Sri Lanka, we are using a community radio station in Kotmale to find information on the Internet, which readers ask for via phone or post. This helps simple villagers to get access to the information super-highway too", University of Colombo journalism lecturer Michael J.R. David said during a recent visit to India. He is the project leader of the Kotmale community radio station, which took off in May 1999 but is already being studied worldwide as an innovative experiment in development communication.

India's state-owned radio (AIR) had set up a string of local radio stations some years ago. But the stations were not locally relevant and community-run. By contrast, community stations can play an important role. Today, it is technically and economically feasible to set up hundreds, if not thousands, of low-powered FM radio stations across the country. On FM, the bandwidth permits a very large number of low-powered radio transmitters. There can be up to 5,000 FM stations, roughly the same number of tehsils (district sub-divisions) in India. Cost and technology are no barrier, what is lacking are laws that permit this, and the political will to allow radio to play its role.

Recently two young people, Markanday and Dayal Singh of Rohtak in Haryana, both aged 21, have assembled a low-cost FM radio transmitter that they hope will spread useful information that could make a vital difference to the lives of villagers, including on agricultural practices.

"Such a type of a radio can play a vital role in low-cost communication. Rural developmental issues can be taken up. Illiteracy (bottlenecks) can be overcome. Farmers in the field could easily be given the information inputs they need", says Markanday. Both the young men belong to Nutra Indica Research Council, a non-profit NGO in Rohtak that seeks to put rural innovators in touch with scientists, and also create a platform for the exchange of ideas, particularly on the rural front.

Weighing approximately 12 kgs., Markanday and Dayal Singh's entire 'radio station' fits into a briefcase. The transmitter has a range of 10 to 15 km radius. A radio network of such small transmitters, each having one studio with recording and broadcasting facilities, and flexible broadcast hours (for example, before and after field work in early morning and late evening in rural India) can very easily be made operational.

Media advocacy groups have been pressing for licenses to be given to universities (particularly agricultural universities, medical institutions, adult and legal literacy organisations), registered cooperatives, women's cooperatives and suitable public bodies.

"Our problem has been a Delhi-centric approach to broadcasting that we in this country has taken. One fear is that (community broadcasting and grassroots radio) could become inconvenient for the existing power-structure", prominent media critic Prof.K.E. Eapen of Bangalore argued recently.

India's middle classes seem to have re-discovered radio with the commercial FM boom. But for the bulk of the citizens of this country, radio is virtually the only electronic gadget they can afford. There's no medium other than radio that can offer relevant, local information too, provided it is aptly utilised. Recent studies suggest that radio in India has a potential listenership of 98.5% of the population of this vast country. There are some 104 million radio homes, double the number of TV homes. Radio has a far broader reach than

television. Over the last decade, All India Radio has focused more on the rural population and the urban lower middle classes, unlike TV's preoccupation with the relatively smaller number of urban upper middle classes. It has also been argued that considering the low levels of literacy in India and the low purchasing power of the large majority, radio will inevitably retain its edge over the print media and television in terms of outreach.

But radio is not only the 'poor man's' option. Even in affluent Europe, radio plays its role in the community's life, taking across relevant, local information in a way perhaps no other media can. It is particularly effective in the busy, morning hours, while TV takes over in the evenings.

So far the official response has been undiluted fear about opening up radio to the people. Officials argue that AIR's low-powered stations in semi-rural areas (some 89 already exist) could offer one-hour time slots to *panchayats* or 'bonafide' representatives of the communities. Official quarters then entangle the entire debate in the question of how they should ascertain which non-profit or voluntary organisation is a 'true representative of the community'.

Official thinking currently seems to be to block non-profit groups from setting up their own broadcast facilities, if possible by using the sops of offering them time-slots on existing official channels. Besides, the strictly 'no-news' policy on all sectors of non-official radio betrays the paranoia that our ruling elites have about this medium. Officials argue that radio stations in a 'remote corner' of India would be difficult to monitor. If so, doesn't the same hold true for tiny newspapers? Anyway, why should the government presume that all citizens of this country have malafide intentions? Is it not possible to have a broadcasting regulatory authority to ensure that broad guidelines, and preferably a voluntary code, is respected?

Why is the government so nervous about opening up a medium that has powerful development potential? Are media groups such as the owners of *The Times of India* and *Midday* more benevolent than development groups? Why is a 52-year-old democracy so terrified of positive decentralisation?

Questions that indeed could do with answers...



FM Radio and the New Urban Public in Nepal

PRATYOUSH ONTA

The residents of Kathmandu have gotten so used to a range of FM radio broadcasts that they tend to forget that as late as October 1995, Radio Nepal was the only radio station that broadcast programs from within Nepal. On 16 November of that year, Radio Nepal started FM Kathmandu (100 MHz) with its own programs. After being on air for some months, FM Kathmandu's program slots were sold to various private operators and this arrangement continues to date with Classic FM having recently bought all broadcast hours.

With countries like India and Sri Lanka in the region who have enjoyed a much longer tenure of democratic freedoms, one would have expected either of them to have hosted the FM revolution in South Asia. But in all of the countries in the region, FM radio has gone the furthest in Nepal because of the relatively more flexible legal regime for broadcast media. On 18 May 1997 Radio Sagarmatha FM 102.4 (owned by the NGO Nepal Forum of Environmental Journalists or NEFEJ) became the first independent station to get a licence. It started its technical testing phase four days later and its regular broadcast on 24 March 1998. Some months later, on 14 October 1998, Kantipur FM 96.1 became the first independent commercial station to go on air (now on 24 hours a day). This was followed by the launch of another commercial station, K.A.T.H. FM 97.9 (owned by Image Channel FM) on 7 January 1999. Eight months later, on 18 September 1999, Metro FM 106.7 (owned by Kathmandu Metropolitan) started its operation. In September 2000, another commercial radio, Himalayan Broadcasting Corporation FM 94, went on air. From January 2001, one of the former slot operators of FM Kathmandu, Hits FM 91.2, has started its technical testing broadcast.

Three FM stations outside of Kathmandu started broadcasting regular programs in the year 2000. Radio Lumbini FM 96.8 in Manigram near the central Tarai town of Butawal is owned by Lumbini Information and Communication Cooperatives Limited. Radio Madanpokhara FM 106.9 in the village of Madanpokhara in Palpa district in central Nepal is owned by the locally elected village development committee, and the commercial Manakamana FM 92.9 in Hetaunda in the central Tarai is owned by Creative Eyes Multimedia and Entertainment Company. Apart from Radio Madanpokhara, all the other FM stations are located in urban Nepal.

FM Radio and the Urbanscape : Seven Considerations

First: FM radio has certainly increased the amount of news available on radio to urban listeners. Since these FM stations are not supposed to broadcast their own official news bulletins (as per one of the conditions mentioned in their licence), none of the stations call their news-oriented programs 'news'. In terms of content, these programs vary a lot: they include a reading of the headlines and some main news from major newspapers of the day, economic reports, sports results, and reportage about literary activities, institutional events, art exhibitions and other happenings in the Kathmandu society at large. By focus-

ing mostly on the 'non-political', these FMs have already stretched the definition of news.

Second, FM radio has increased the amount of what can be called 'everyday life' information. This includes information about special events, traffic flows in the city, weather forecast, flight schedule, bus schedule, market prices for vegetables and fruits, air pollution readings, health tips and horoscopes (for those who believe in them). In addition, FM radio has provided 'live' information about events such as elections, religious gatherings, and national celebrations.

Third, FM radio is assisting the distribution of knowledge in new forms over the radio waves. This is being done through programs designed to cater to various curiosities - about contraceptives and careers, music and movies, stage and sports, language and literature, health and hobbies and so on. Some of this new knowledge is executed through 'quiz' formats, while others come in the form of chat programs and musicals. Some of this new knowledge is superfluous but it being on air is a kind of knowledge democratization at work. Music production has received a shot in the arm due to FM radio.

Fourth, FM radio has increased the amount of social analysis available on radio through various programming formats. In the form of a monologue it comes as anonymous or attributed response from persons walking on the streets ('vox pop' in radio parlance) or as commentary from noted social critics such as Rhituraj, Chatyang Master, D. P. Bhandari and Kishor Nepal (alas, they are all male!). As dialogue, such social analysis comes in the form of one-to-one interviews between the host and her guest or in the form of multiple dialogues between the host(s), guests and listeners who call in by phone (e.g., *Dabali* in Radio Sagarmatha). Frequently, others have participated in such discussions by sending in their queries by mail, fax or email before the programs go on air. Such analysis can also be found in feature reportage focused on a specific theme as innovated by the early team of 'Hamro Khaldó' in Radio Sagarmatha. Some of the subjects covered by these programs have never been discussed over radio before, and others have received critical treatment impossible to find on Radio Nepal. This kind of analysis is being done in Nepali and Newari already and will emerge in other languages as the FM revolution spreads across Nepal.

Fifth, FM radio's interactions with government officials and politicians have added to the collective knowledge of urbanites regarding (mis)governance in Nepali society. Similarly, discussions with practitioners of other professions have demystified specialist knowledge, intellectually empowering the community of listeners.

Sixth, FM radio has increased the amount of oral history available on the radio. This has been achieved through programs that present the life history of a 'big' person in his own voice (*Mero Katha*) or through a profile of a 'subaltern' made by a reporter. Alternatively, personal history often related to love tragedies (but occasional successful romances) has become very popular in the form of letters to host Kalyan Gautam ("Dear Kalyan" is how these letters begin in *Mero Katha*, *Mero Git* in Hits FM). Interviews by Bhairab Risal with older folks in *Uhile Bajeka Palama* are also of this genre.

Seventh, FM radio programs have encouraged cross-media reference as a routine practice of urban knowledge. While newspaper content has long been read over FM radio, programs aired have influenced the print media as well. For example, since FM reports highlight local sports events, broadsheet dailies have had to follow suit by increasing their cov-

erage of local sports. Additionally radio program hosts are bringing Internet content to listeners who do not have direct access to the net and more radio programs are increasingly becoming available in the Internet.

These seven points hardly exhaust the new knowledge urbanscape FM radio has helped to generate in Kathmandu. But my intention is not to be exhaustive. Rather it is to point out suggestively how FM radio is contributing to a new kind of urban public domain in Kathmandu.

FM Radio and the New Communities

In this section I highlight FM radio communities and discuss their significance for the new urban public sphere. Why highlight these communities some of which are 'imagined' at best? What have they got to do with the new contours of our urban life? As will be clear from the examples discussed below, FM radio is not only what goes on air. It is as much what happens off air. If the programs aired are engendering a new public sphere, then the communities that produce them and the communities, in turn, produced by them are important elements of that sphere. The skills, intentions and desires of these communities define for us some of the broad contours of our own experience of the new city.

First in the list of real communities is FM owning institutions. While Radio Sagarmatha is owned by an NGO, commercial companies own Kantipur FM, K.A.T.H. FM, HBC FM, Hits FM, and Manakamana FM. Locally elected government bodies own Metro FM in Kathmandu and Radio Madanpokhara in Palpa. Radio Lumbini is owned by a cooperative. Companies, cooperatives, local governments and NGOs are real institutional communities that have taken up the new challenge of managing an FM station (this variety in ownership is an important indication of the pluralism possible in radio in the region). The stations might not have all the skills necessary for optimum operation but they are certainly learning on air. Off-air they have even tried promotions such as blood drives, child health camps, music awards and anti-pollution campaigns to bolster their on-air image.

The group of program producers who either work as freelancers or are employed by various FM stations comprises the second real community. When serious talk about FM radios started in Nepal some seven years ago, many wondered where the people who would run these stations would be found. That worry was genuine but exaggerated. After all, we have found the people - program producers, technical experts, reporters, talk show hosts, and music jockeys - indigenously, however inadequate their present skills might be. Apart from individual producers, we also now have institutional program producers. For instance, Communication Corner headed by Gopal Guragain in Kathmandu currently produces a half-hour program called *Kayakairan* that is simultaneously broadcast over the three FM radio stations outside of Kathmandu three times a week. Its aim is "to bring listeners from outside the Valley emotionally close to the center by providing them up-dates on happenings in Kathmandu". While the program cassettes have to be sent by bus at the moment, with infrastructural developments, those stations will be able to download the programs from the Internet directly.

The third real community comprises of a different type of producers - lyricists, musicians, singers and others related to the music industry. They have benefited from the FM

boom, as there are now more outlets for their creations. Equally, the stations can choose from a larger pool of talent. But this subject deserves a separate treatment by more knowledgeable analysts.

The fourth real community comprises of a few FM activists. The Community Radio Support Centre (headed by Raghu Mainali) of NEFEJ provides support to any institution interested in opening a community radio station. The Centre will do feasibility studies for them and give hands-on training to program producers. Communication Corner, the Centre for Development Communication, Nepal Press Institute and some other organizations have done research on different aspects of FM and have produced some useful manuals. Mainali has also filed a writ in the Supreme Court challenging rules imposed by the government on FM stations that, according to him, violate the Constitution of Nepal and the National Broadcasting Act 2049. If the Court agrees with him, it will become easier to establish and run FM stations.

FM radio has also given birth to new imagined or transient communities whose own importance cannot be underestimated. Constituents of these imagined communities come in two forms. First are news communities: people and institutions that are interested in having news about their activities broadcast over radio and people who listen to such broadcasts. In examining my incomplete records, I was surprised to find just how many members of this community sent news of various happenings to Radio Sagarmatha's *Halchal* program during a two-month period in mid-1999.

The second imagined community consists of listeners of specific programs such as Upendra Aryal's musical *Bihani Yatra* or Kalyan Gautam's *Mero Katha, Mero Geet*. He is by himself. But he knows that, at that very moment, there are many others listening to the same program. He will never meet most of them, yet he will feel like he is one with them - an imagined community of the sort that has been made famous in social science parlance by Benedict Anderson. FM radio has created many such imagined communities of fans of particular stations, specific programs or their hosts. At times, a letter of praise or complaint against the host for being partisan toward other members of the imagined community breaches the anonymity, but it is never seriously done. On other occasions, such imagined communities become a bit more real when, for instance, some FM fans went to Sundarjal for a picnic to celebrate the new year 2000, or fans of Prakash Sayami's program on 'eternal' Nepali songs met to advance their common interest. Faces were put to known voices heard over the airwaves but the community was a transient one at best. The fans soon returned to living their own individual friendships with FM. As critic C.K. Lal put it nearly three years ago, FM is a good friend to have in the city when families consist of atomized individuals.

Management, production, training, researches, publication and support skills that have been developed in the context of FM radio are important assets not only for the field of media but also for urban life and Nepali society at large. Many of these skills have been transferred from other professions and they in turn will be passed on to other trades. Whatever might be their trajectories, the communities that possess them are real and they are here to stay. The imagined communities are also no less important for without them the circuit of FM broadcast will not be complete. The future of our collective urban imagination is richer by their presence whatever the politics of taste for FM programs might be.

The 'daily' reality of partition

Politics in newsprint, in 1940s Kanpur¹

SAUMYA GUPTA

Nations are necessarily exercises in remembrance and forgetting; they remember through ritual commemoration and forget through collective amnesia. In the fiftieth year of their Independence, Indians however, decided to commemorate what they had hitherto chosen to suppress or forget. As the subaltern became the authorized alternative to elite officialdom, quite a few sacred binaries were opened up, if not reversed. Partition as the effaced annexe to our national history became the privileged site for such corrective treatment. So half a century after it happened, Partition and not just Pakistan - which has always been a constant with the Indian state and people - again found itself at the centre of both political rhetoric and academic ruminations.

But Pakistan and Partition had always made good copy. Right from its ill-defined birth in 1940, through the myriad definitions that were attached to it, till 1947, when its contours first became visible, the Pakistan demand was one sure way for politicians of all hues to get reported on the front page of national and local newspapers. The imprecise parameters of the idea of Pakistan added to its mystique. It travelled the whole gamut of terrain from utopia to dystopia. On the one hand, it was heralded as a panacea for all the problems of Indian Muslims (and of India, by extension), on the other, it was decried as a satanic conspiracy aiming to indefinitely stall India's march towards freedom and progress. A thematic developed with Partition and Pakistan at its centre. Major national events - Quit India movement, Cripps and Cabinet missions, Rajagopalachari Plan, Mountbatten Plan and so on - followed one after another; local incidents abided their own dynamic. There remained, however, a kind of basic continuity in the way all these happenings were articulated by the contemporary press and digested by the public opinion. News of various 'happenings' was refracted through the prism of Pakistan: the reader was encouraged to understand these newsworthy happenings through the over-arching categories of nation, culture, religion, history and tradition - all of which were seen as hostage to the notion of Pakistan, or conversely, for the Muslim League sympathizers, to be actualised only through Pakistan itself.

Historians have used newspapers mostly to corroborate opinions and viewpoints backed by hard archival data. Works on the print media have seldom gone further than commenting on its links with political parties, or on the impact of the national movement on the press. The press is seen as a contemporary commentator, a kind of participant observer of the political scene, and it is this very participatory nature which supposedly makes the newspaper unfit to serve as an unbiased and objective historical source. Moreover, the non-fixed nature of the newspaper - in Benedict Anderson's phrase 'the one-day best-seller' - denies it the very finality normally associated with printed texts.² Conversely, the newspapers have also been used as direct pointers to popular consciousness. But rarely have

they been opened up to historical scrutiny as historical agents involved in the formation of discursive structures that map events.

A product of modernity, the newspaper ventures information that is instant and efficient. Efficiency and speed in collection and dispatch are vital for the dissemination of news as print. The mechanics of this rendering of the event into news is, however, a temporal process that is kept well hidden from view. What is overlooked, or wilfully forgotten is that the 'daily' gives news that is delayed, by at least a day.³ Yet this late news has a kind of immediacy - for the reader the event happens only when it flashes as printed news. Moreover, the spatial economy of the newspaper conveys the relative importance and newsworthiness of the event: front-page left side (the right-side, in case of Urdu newspapers) news in bold typeface solicits attention as an event of signal importance. It remains in this privileged position till another of its ilk shifts it to the inner pages, or even out of the paper, and finally out of the reader's mind. The format of news production then automatically limits news reception. News values and news judgements not only direct our thinking to specific areas, but also direct it away from other, apparently non-important, areas, contributing thus to our mental maps of the world. In the realm of politics, they define - and define away - opposition.⁴

Analyses of news value show that this choosing and prioritising of information is not random but involves an implicit understanding of the nature of society, the location of power in it, as also a notion of how this power is or should be exercised. Key categories of newsworthiness - the elite, the government, political parties - all have, according to Stuart Hall, the routine knowledge of social structures inscribed within them. "To be intelligible to its audience the press must infer what is already known, as a present or abstract structure, but [this structure] is a construction and interpretation about the world".⁵

It is an 'interpretation' that parades itself as truth. This was also the case with colonial India, in the 1940s. The press was then, for many, the only available means of engaging with the wider world. Most contemporary newspapers were openly partisan (of course with an eye on the colonial censor), though partisanship was glorified as service to the national movement. A nation could only be made if 'national facts' were known by all. The press, and especially the vernacular press, rendered singular service in disseminating the preferred nationalist view of the events, as the only correct way of understanding them. Moreover, many a time the truth offered by the press was the only version that reached the individual in a small town or *qasba*.

By commenting on and reiterating ad infinitum a subject - say, for example, Pakistan - the press in effect constructs images. These images, like coins of exchange, acquire public acceptability and can be recalled by the sheer mention of a single word, or by a news clip from the past. Crucially, this image cannot be dismissed as irrational fabrication. The veracity of the press account may be questioned by some, but few people would doubt that the event reported took place in some other way. "For people living in a second hand world... symbols focus experience (and) meanings organize knowledge, guiding the surface perceptions of an instant no less than the aspirations of a life-time".⁶

The dependence on mediated knowledge about the world increased manifold in a milieu where the levels of literacy were not very high but the level of political participation was considerable. Along with pamphlets and posters, newspapers formed the basic source

of knowledge about leaders and political parties. The only other means of mass communication remained the grand sabha or public meeting, often organized as reaction to reports (gathered primarily from newspapers) about events or calamities of national importance. As riots took hold of the country from about 1946 to 1948, Kanpur was deluged with various 'days' being celebrated or observed. There was a Noakhali Diwas to protest against atrocities on Hindus in Noakhali, a Bihar Day (*yaum-e-Bihar*) for those against Muslims, and a Pakistan Day that was countered - not through a Hindustan Day but, interestingly by a Punjab Diwas. These were organized after reports of massacres or riots were published by the local newspaper. In turn, these sabhas themselves were news enough to get reported in local papers, often inciting other reports and events. Beyond such obvious relations between these 'aural' gatherings and printed material, orality freely, and crucially, intermixed with printing and literacy. The last and most often, the mass audience of the newspaper was the one that heard it - transliterated, moreover, from the *shuddha bhasha* (pure language) into a variety of regional, local dialects, and explained with the help of familiar, and frequently, even familial metaphors and analogies.⁷

It is to open up and interrogate these images that accrued to Pakistan and Partition at a local level that I look towards the *Vartman*, a local but immensely popular newspaper published from Kanpur during the 1940s. In its pages, Partition is enacted at various levels, and Pakistan established, before it actually came into being. In its own way, the *Vartman* was engaged in outlining and consolidating a realm of knowledge that revolved around Hindustan and Pakistan, nation and community, religion and individuals, Hindus and Muslims, and others different from them. Though these characterizations were formed over years, Partition made them more strident and uncompromising. Inasmuch as *Vartman* was involved in the fashioning of this discourse in Kanpur, and as much as it was part of it, it offers insights into the complexities of the movements for and against Pakistan.

By the 1940s, *Vartman* was an influential presence in the journalistic landscape of Kanpur. The first and only daily paper to be consistently published from Kanpur for about two decades, *Vartman* positioned itself as the plebeian counterpart to the *Pratap*, the better-known weekly printed from Kanpur. From the very beginning Ramashankar Awasthi, its proprietor and editor, very consciously located the paper within a *Kanpuriya* idiom. Almost all its pages were steeped in local colour. National news was of course important, but its local ramifications mattered more to *Vartman*. Interestingly, the process through which the news of a national event got translated into local jargon was quite transparent in *Vartman*. The paper framed its report in three stages. The first was when an event made it to the front page as news.⁸ Catchy headlines laid out the paper's - and supposedly its readers' - reaction to the news. Stage two appeared two days later: a long editorial on what presumably was judged as the most important news item worth commenting on. This editorial delineated the relative importance, or non-importance, of the 'news' and placed it in its historical context. It broadcast for its audience the 'actual' meaning and the correct way of understanding the event/news. Stage three commenced - again approximately after two days - when the daily satirical column "Manoranjan" unscrambled that editorial for popular entertainment. Through a dialogic tone and impudent lampooning, the argument was given a local inflexion, placing it firmly within the realm of the prevalent common sense.

Vartman addressed its own, largely Hindu, audience in Kanpur. This predominantly upper caste (though not always upper class) readership was divided politically between the Congress - and its two factions in Kanpur - and the local Hindu *Sabha*. *Vartman*, in deference to this division, was constantly engaged in a delicate balancing act. In spite of the paper's latent leanings towards the Hindu *Sabha*, the national stature of leaders like Nehru and Gandhi almost always tipped the scale towards the Congress. Most of the time, however, *Vartman* tried to walk the tightrope - rooting for the Congress while fraternizing with the local Hindu *Sabha*. As such, it offered a perfect platform for the Congress right wing, which by 1945, had come to hegemonise and author the public discourse in Kanpur.

From around the time C. Rajagopalachari put forward his argument for a rational consideration of the Pakistan demand (July 1944), and convinced Gandhi to hold talks with Jinnah, the paper's rhetoric was crowded with the motif of Pakistan. Notwithstanding the still ambivalent nature of Jinnah's Pakistan, *Vartman's* Pakistan was understood as an all-encompassing catastrophe about to befall India: a death-wish from "the unparalleled horrors of which even a thousand Gandhis (sic!) would not be able to save India, its history and culture".⁹ Gandhi's consent to meet Jinnah at the latter's house in Bombay was portrayed as his acquiescing in the demand for Pakistan. Further, 'Gandhi's love for Muslims' and his 'mastery of the art of surrender' was a pointer that *shuddha*, unalloyed Pakistan would inevitably result out of such meetings. Jinnah's rebuffs to Gandhi's offer were insults added to injury, and the breakdown of the talks was something to be welcomed. *Sab achcha hi hua!* (All's well that ends well!) was the paper's verdict on the episode.

For *Vartman*, Pakistan was not just synonymous with Muslim communalism, though it was primarily that. The discomfiture with Pakistan - at such an early date when its contours had hardly taken shape - was that it questioned, centrally, the totalising narrative of Indian nationalism. *Vartman* showed Pakistan as miasmic: it totally destabilized the category of nationalism, making it open and accessible to all other groups within the political spectrum. As the paper remarked early on, "giving in to the Pakistan demand would only lead to endless partitions. We will not be able to sit peacefully.... All minorities would ask for the right to self-determination. How would we then stop them? Even women... would one day demand a separate *Jananistan*".

To counter the Muslim League's two-nation theory, *Vartman* (almost) posited India as a multi-national entity, led into modernity and progress under the aegis of the Congress party. The Congress's seminal work of infusing the spirit of nationalism into an eternal but fragmented India, was what legitimised its (attempted) monopoly of the national political space. Since Pakistan had opened a Pandora's box by contesting this monopoly, a radical restructuring of the nationalist discourse was required. Either the discursive limits of the nation were to be modified/extended beyond the ideal represented by the Congress, or, conversely, various contesting groups/nations be disciplined and appropriated within a hierarchised (rather than homogenized) nationalism. *Vartman's* advice was to go for the second option. It provided a blueprint for it. If the Congress represented the modern, constructed version of Indian nationalism (*svadhintapriya*), the Hindu *Mahasabha* represented the 'natural' nationalism (*svabhavik rashtravad*) inherent in the Hindu community. Members of the Hindu *Mahasabha*, the Ambedkar-ites, Dalits and other such groups were argued to be plain 'sel-

fish' nationalists (*swarthvadi*), while the Muslim League, at the nadir of this scheme, represented 'aberrant' nationalism- indeed, communalism - based on fraudulent principles, without any legacy of participation in the freedom struggle, or of any kind of sacrifice for the nation.

It can be seen that this hierarchical layout took care of both the past and the future, while adroitly delineating the present. The *svadheentapriya* could agree to partition - Pakistan - but certainly not the *rashtravadi* for whom the territorial unity of the country was as sacred, if not more, than a territorially compromised freedom. Since both freedom and integrity were desirable, the political impasse could only be overcome if these two categories of nationalism borrowed from each other rather than remain separate - and opposed - political entities. Only then - by the sheer weight of majority - would true nationalism be able to realize complete liberation and block any kind of Pakistan, *Achhootistan* or (god forbid!) *Jananistan*. Vartman was prophetic in asking for this convergence. Its pages soon recorded Veer Savarkar's entreaty to Congressmen to join the Hindu *Mahasabha*, followed, a mere twenty days later, by Sardar Patel's invitation to the *Mahasabha* members to join the Congress in their fight for 'the unity and integrity of India'.

Since Pakistan at this point existed more in the pronouncements of the leaders, Vartman too framed its argument through them. Gandhi and Jinnah formed two levers against which the narrative of the paper was positioned. Till about 1944, Jinnah was viewed more as a strong and powerful leader, well able to extract his 'blank cheque' from Gandhi and the Congress. With the fragmented Muslim politics of the United Provinces acknowledging his supremacy, the Hindi press was not far behind in lionizing him as such. It is interesting that though he was projected as leading a paper organization rife with internal squabbles (all of which was reported with much glee), Jinnah's leadership over the Muslim masses was never questioned. Rather, a messianic appeal was attributed to him: "Mr. Jinnah is as popular among Muslims as Gandhiji is among Congressmen". However, "unlike Gandhi, Jinnah commands a community of chauvinistic, aggressive believers. United by religion and passionate about it, they were compelled by the force of their belief to wipe out the kafirs". This fanatical zeal, when coupled with the 'backwardness' of the Muslims, made them incapable of nationalist thought. With Jinnah obstinately clinging on to the Pakistan demand, his image, however, increasingly began to take negative overtones. Throughout 1944-47, Vartman portrayed Jinnah as an irrational and overbearing madman. Even his inconsequential interviews and speeches were reported on the front page, and always with reference to Pakistan. By the mid-1940s Jinnah had no other identity left, save that of the satanic progenitor of the idea of Pakistan. In a curious reversal, Jinnah was imaged, through Pakistan, the child becoming the father of the man.

Gandhi, on the other hand, largely led the Hindus, who, according to Vartman, were a community of disinterested, inert nationalists - a people whose "political behaviour is marked by cowardice, religious enthusiasm by lethargy and who are hopelessly fragmented socially". In short, a people who had made a virtue of passivity by calling it toleration. Though earlier the paper was as deferent to Gandhi as any other nationalist organ of the forties, the centre staging of Jinnah gradually took some shine off the stature of the Mahatma. The preferred and oft-repeated analogy for Gandhi and Jinnah became that of Chamberlain and Hitler - Gandhi, like Chamberlain, bending backwards to appease the fire-

brand, aggressive Hitleresque Jinnah. Mere willingness to negotiate with Jinnah was construed as his approval of Jinnah's designs, as along with 'loving' Muslims, Gandhi "is adept in the art of surrender". However, his personal authority was still powerful enough to carry the nation along, to force his decision on the Congress. Nothing would stop Pakistan from becoming a reality once Gandhi endorsed it. Hence the need to contain Gandhi, to make him weak: he was reminded of his old age and ill health and repeatedly advised to spend the rest of his days in peace. His vow that Pakistan would be made over his dead body was constantly thrown at him. All present political and communal ills of the country were laid at his door, and all these ills stemmed from his advocacy (and practice) of the appeasement of Muslims. This was another pre-history of Partition which was being written not with the fanatical Muslim but with Gandhian politics at the centre.

Vartman's fascinating dialogue with Pakistan did not limit itself to major leaders. It layered its discourse progressively, encountering Partition/Pakistan strategically at the national, provincial and local level politics. Vartman gave pride of place to those Muslim groups, who publicly opposed the idea of Pakistan. These groups consisted, in the United Provinces, mainly of Muslim divines connected to the *Jamait-ul-Ulema*, or to groups like the Momins, the Ahrars and the Khaksars. Accordingly, all the paraphernalia of news was provided: bold typeset, approving editorials, op-ed articles and "Manoranjan" applauding endorsement - *ek Musalman yeh hain, ek aap hain*. (Look at these Muslims, and look at you [the Leaguers]). News values, however, cannot be just attached, howsoever good the intentions. It soon became clear, especially after the Simla Conference, that these were but marginal voices railing against the chorus of support for the Qaid and his dreamland. As it became clear that their affirmation of faith in the Indian nation and the Congress was not enough reason for the British to veto the League, the paper lost even the rudiment of interest in their politics. Devoid of official weightage as well as popular support, these 'other' Muslim voices were not news anymore.

The Non-League Muslims who remained much longer in the news were the Nationalist Muslims. Seen as the last vestige of sanity left in the Muslim community, Nationalist Muslims showcased the secular credentials of the Congress. Jeered by the Muslim League and its sympathizers, they were handled with kid gloves by the Hindi press. These were the 'others' who had overcome their otherness: what better example of the syncretic nature of Indian nationalism than to have members of the 'other' nation speaking 'our' language. Azad, Humayun Kabir, Rafi Ahmed Kidwai, Hamid Khan and Abdul Qayum were given prominence in the pages of Vartman. Scuffles, brickbats among Leaguers and Nationalist Muslims during provincial elections in Kanpur, were 'prime' news material. The arguments of Nationalist Muslims against Pakistan were given prominence, as if they emanated from some inborn knowledge, from an area of an authentic Muslim-ness to which they had privileged natural access.

Inevitably, Pakistan managed to spoil even this idyllic relationship. As the paper adopted an increasingly strident tone, and as it manufactured the Muslim 'others' suited to this tone, these *Kangressi* Muslims seemed too utopian - and, hence, unreliable. The construction of a rhetoric against the Muslim nation required the presence of that nation, of a unified Muslim community, for, if the Hindus had to fight Pakistan effectively, they had to

realize that Pakistan could exist almost anywhere. Indeed, that Pakistan was synonymous with being Muslim; that Muslims cannot be internally differentiated; that all Muslims - even the friendly neighbour, the ulema or the Momin, and the Nationalist Muslim - were primarily Muslims. Protestations to the contrary, their political identity would always remain conditioned by their natural religious identity. Collapsing Nationalist Muslim with 'Muslim nationalists' of the League variety, the paper projected a much more homogenized Muslim community than even the League could have hoped for. Those very Muslims, who had been stalwarts of the Congress nationalism, were now termed closet Leaguers. As Pakistan inched forward, it transformed all Muslims into its potential citizens, Pakistanis, divinely ordained, as it were, to sympathize with the Islamic homeland.

The realization of Pakistan expectedly made matters worse for Nationalist Muslims. The ever curious prefix 'nationalist' before their names was as if erased overnight. These, along with countless other Muslims - unconcerned with nomenclature but consistent in their opposition to Pakistan - who opted to stay in India, were converted into the residual category of 'three crore Muslims left in India', to be held as hostages, in their earlier homeland. Their allegiance to the Indian state cannot but be suspect. If they insisted in professing loyalty, they were required to provide proof - "by fighting (read killing) their Pakistani brethren in Punjab". Within a span of five years, Muslims - who had earlier been Nationalists, Leaguers, Momins, Ahrars, Khaksars, ulema, landlords, peasants, workers, neighbours, men, women, children, hostage - became solely, outsiders, Pakistanis, and enemies of the nation for Vartman.¹⁰

Locally, this increasingly virulent Hindu discourse received reinforcement through the riots that ravaged the nation around this time. The death toll, predictably, did not differentiate between nations and peoples, though competing discourses certainly did.¹¹ The Vartman pontificated, "It is not necessary, now, to point out the community which starts the riots".

The Kanpur news page (*Kanpur ki Diary*) offered local, neighbourly, everyday examples to this theorisation. Though disturbances took place only in November 1946 and in April 1947, the city atmosphere generally was rife with tension. There was a perceptible increase in mutual suspicion between the two communities. Witness these news reports and letters to the editor in *Kanpur ki Diary*: *Chief ki zyadati: Hindu gharon mein gana-bajana band* (Highhandedness of the Chief: Ban on music in Hindu houses), when a police inspector, Usman Ali, intervened in a noisy birthday party going on outside a local *masjid*, during the time of namaaz. *Miyanji ki paintare-bazi: roz roz naye shagufe ho rahe hain* (The antics of Miyanji: new mischiefs are being invented daily), was about a Muslim priest who challenged an old woman throwing garbage in the *masjid* premises. Again, it was not right that "the Hindus of the ward Patkapur have to cross three Muslim *bastis* in order to reach the ration shop and are greatly inconvenienced".

These were small incidents (if that) causing disproportionate alarm, exaggerated and amplified responses to perceived threats magnified by press coverage. The phobic unease of people living next door was fuelled by widespread rumours, and Vartman's relationship with them is clear. Rumours increasingly found their way in print, thereby gaining credibility and legitimacy. The Pakistan-in-every-mohalla that Vartman was cautioning against was largely a product of such rumour mongering.

Vartman's relationship with the 'Pakistan rumours' was contingent upon its changing relationship with the idea of Pakistan itself. In the early forties (up till 1945), Vartman strove to counter rumours circulating in the city. In fact, all the time it believed Pakistan to be a *shagoofa* (a baseless mischief), it dismissed rumours as the brainchild of goons out to make a quick profit by disrupting trade and commerce and the general well being of the city. Even post Noakhali and Bihar riots, the "Manoranjan" column implored Kanpur-walas to steer clear of the "gigantic rumours which are being manufactured within the city".¹² Vartman kept a sarcastic distance from all kinds of rumours - to the extent that it treated Pakistan as a giant rumour believed in only by the credulous, gullible and illiterate Muslim masses.

But as Pakistan became comprehensible and tangible, Vartman abandoned this sense of distance and restraint. Far from asking people to pay no heed to hearsay and gossip, the paper took to printing unauthenticated reports purporting to illumine Pakistani, i.e. Muslim actions and ambitions. With the recovery of some arms in the Muslim dominated areas in Kanpur, this paranoid abuse reached a new high. Any and every Muslim became a stock-piler of deadly war-weaponry - field rifles, mortar guns, Tommy guns. Machine guns were allegedly recovered from Muslim houses, along with gardening tools and kitchen knives. Many more deadly weapons would have been discovered, reasoned Vartman, but for the fact that the criminal Muslims were obviously shielded by the Muslim police officers. Rumour was patently news now, and was authenticated by being printed as news. Also, beyond a point it did not matter whether what Vartman was printing was true or not. For even if these reports were true, their news-value was only through their association with that omnibus bogey of Pakistan. What was news and what merited reporting had now become exclusively reports about Muslim complicity in the riots and their unstinted, total support for Pakistan. Rather than a deliberate manipulation of the news, a process of orchestration seems to be at work here.¹³ In conveying the sense of panic and by placing it within the fluid political situation, Vartman was voicing and feeding into the concerns of its audience, along with exploiting existing ways of thinking, to perfect and season its own discourse about Partition.

For the people of Kanpur, Pakistan was not located somewhere out there, in Punjab or Bengal, or even in Aligarh and Lucknow. Rather it was perilously close and proximate. There was no time, or indeed rationale, for maintaining a sarcastic distance, of calling Pakistan a *shagoofa*, or deriding the very idea of Pakistan as unstable. The local idiom in which Vartman outlined Pakistan as well as the arguments and metaphors through which it countered Partition, made Pakistan a dangerous reality within the United Provinces. Indeed for many people in the city, especially those who believed in Vartman's projections, Punjab and Bengal were just initial pointers to the drama that was to unfold in the heart of the United Provinces, in Kanpur itself.

There can be little doubt that Vartman contributed in making Partition 'present' as an immediate and unmitigated disaster about to engulf Kanpur and its residents. Vartman was just one of the many doomsday diviners in the city. It was one for whom, however, the question of Partition and Pakistan overwhelmed all others. In little over two years (from 1945 to 1947), Vartman changed its heroes, its agenda, and of course, its language. It charted the whole territory from being anti-Pakistan to being anti-Muslim. In this, it reflected the changing character of the city of Kanpur and its changed political orientations. A constant motif

in Vartman from about 1944, Pakistan comes across as curiously, obstinately local in flavour, used to spice up just about any news. It was both circumscribed and extended; its presence was made immediate even as its meaning was made malleable to include both a social and a political community. In Vartman's discourse, Pakistan acquired varied meanings and myriad hues, all of which could scarcely be contained within its larger and 'national' reality.

NOTES

- 1 This is an abridged version of an article in *Translating Partition*, eds., Ravikant and Tarun K. Saint, Katha, New Delhi, forthcoming.
- 2 *Imagined Communities: Reflections on the Origins and Spread of Nationalism*, Benedict Anderson, Revised edition, Verso, London, 1991, p. 33.
- 3 In the 1940s, perforce, the delay was even greater - about two days before an event (of national importance) was reported by a daily newspaper, and about eight to ten days in the case of weeklies.
- 4 *The Whole World is Watching*, T. Gitlin, University of California Press, 1980, p. 2.
- 5 "The Determination Of The News Photograph," Stuart Hall, in ed. S. Cohen and J. Young, *The Manufacture Of News*, Constable, London, 1973, p. 183.
- 6 C. Wright Mills quoted in Edward Said, *Covering Islam*, Pantheon Books, New York, 1981, p. 43.
- 7 The trope used to explain Partition was frequently that of a division in the family, with Hindus and Muslims were quite often referred to as two brothers. These naturalised descriptions are still standard in accounts of the Partition, as is evident from their almost ubiquitous presence in the recent literary and journalistic endeavours commemorating the fifty years of India's Independence and Partition.
- 8 Thus while the speeches of Mahatma Gandhi and Jawaharlal Nehru were reported as their *bhashan*, *vichaar* and/or *udgaar* (speeches, ideas, statements), those of Mohammad Ali Jinnah and other League leaders were almost always captioned as their *pralaap*, *behak* and/or *dhamki* (outcry, blabber, threat): "*Leaguee on Ki Uchhaikood*", Vartman, 24-11-1945, p. 6; "*Mister Jinnah Ka Pralaap*", Vartman, 11-3-1946, p. 2.
- 9 All quotations, unless otherwise specified, are from Vartman.
- 10 "Chargesheet," Editorial, Vartman, 2-10-1947, p. 2. This extremely virulent piece appeared on the Mahatma's birthday, an occasion usually reserved for accolades for him. Nothing can exemplify more the helplessness of Gandhi in the hostile climate of the time. "Pragati!" Editorial, Vartman, 12-11-1946, p. 2.
- 11 The Mridula Sarabhai Enquiry that indicted the local Congress for the Garhmukteshwar riots was reported in Vartman but was seen as flawed as it "did not take into account the conspiracy of Muslims who shouted national slogans while rioting to defame the Congress". However, no further news, report or reference to these findings appears again in the paper.
- 12 "This city is a den of rumours. What can the journalists write? Such rumours germinate in the heads of the people here that even the most rational minds are bewildered", "Kampu Sharief," "Manoranjan", Vartman, op.cit.
- 13 Images of Welfare, P. Golding and S. Middleton, quoted in Ralph Negrine, *Politics and the Mass Media* in Britain, London, Routledge, 1994, p. 129.



**"The velocity of a message can, at times,
be tangential to the trajectory of the medium."
(The Aerodynamics of Communication)**

The ABC of Tactical Media

DAVID GARCIA + GEERT LOVINK

Tactical Media are what happens when the cheap 'do it yourself' media, made possible by the revolution in consumer electronics and expanded forms of distribution (from public access cable to the Internet) are exploited by groups and individuals who feel aggrieved by or excluded from the wider culture. Tactical media do not just report events, as they are never impartial they always participate and it is this that more than anything separates them from mainstream media.

A distinctive tactical ethic and aesthetic that has emerged, which is culturally influential from MTV through to recent video work made by artists. It began as a quick and dirty aesthetic. Although it is just another style, it (at least in its camcorder form) has come to symbolize a verité for the 90's.

Tactical media are media of crisis, criticism and opposition. This is both the source their power, ("Anger is an energy", John Lydon), and also their limitation. Their typical heroes are: the activist, Nomadic media warriors, the prankster, the hacker, the street rapper, the camcorder kamikaze. They are the happy negatives, always in search of an enemy. But once the enemy has been named and vanquished, it is the tactical practitioner whose turn it is to fall into crisis. Then (despite their achievements) its easy to mock them with catch phrases of the right: 'Politically correct', 'Victim culture' etc. More theoretically, identity politics, media critiques and theories of representation which became the foundation of much western tactical media are themselves in crisis. These ways of thinking are widely seen as carping and repressive remnants of an outmoded humanism.

To believe that issues of representation are now irrelevant is to believe that the very real life chances of groups and individuals are not still crucially affected by available images circulating in any given society. And the fact that we no longer see the mass media as the sole and centralized source of our self-definitions might make these issues more slippery, but that does not make them redundant.

Tactical media is a qualified form of humanism. A useful antidote to what Peter Lamborn Wilson described as "the unopposed rule of money over human beings". And also an antidote to newly emerging forms of technocratic scientism which, under the banner of post-humanism, tend to restrict discussions of human use and social reception.

What makes Our Media Tactical? In *The Practice of Every Day Life*, De Certeau

analysed popular culture not as a 'domain of texts' or artefacts but rather as a set of practices or operations performed on textual or 'text like structures'. He shifted the emphasis from representations in their own right to the 'uses' of representations. In other words, how do we as consumers use the texts and artefacts that surround us. And the answer, he suggested, was 'tactically'. That is, in far more creative and rebellious ways than had previously been imagined. He described the process of consumption as a set of tactics by which the weak make use of the strong. He characterized the rebellious user (a term he preferred to consumer) as tactical, and the presumptuous producer (in which he included authors, educators, curators and revolutionaries) as strategic. Setting up this dichotomy allowed him to produce a vocabulary of tactics rich and complex enough to amount to a distinctive and recognizable aesthetic. An existential aesthetic. An aesthetic of poaching, tricking, reading, speaking, strolling, shopping, desiring. Clever tricks, the hunter's cunning, manoeuvres, polymorphic situations, joyful discoveries, poetic as well as warlike.

Awareness of this tactical/strategic dichotomy helped us to name a class of producers who seem uniquely aware of the value of these temporary reversals in the flow of power. And rather than resisting these rebellions they do everything in their power to amplify them. And indeed make the creation of spaces, channels and platforms for these reversals central to their practice. We dubbed their (our) work tactical media.

Tactical Media are never perfect, always in becoming, performative and pragmatic, involved in a continual process of questioning the premises of the channels they work with. This requires the confidence that the content can survive intact as it travels from interface to interface. But we must never forget that hybrid media has its opposite its nemesis, the *Medialen Gesamtkunstwerk*. The final program for the electronic Bauhaus.

Of course it is much safer to stick to the classic rituals of the underground and the alternative scene. But tactical media are based on a principal of flexible response, of working with different coalitions, being able to move between different entities in the vast media landscape without betraying their original motivations. Tactical Media may be hedonistic, or zealously euphoric. Even fashion hypes have their uses. But it is above all mobility that most characterizes the tactical practitioner. The desire and capability to combine or jump from one media to another, creating a continuous supply of mutants and hybrids. To cross borders, connecting and re-wiring a variety of disciplines and always taking full advantage of the free spaces in the media that are continually appearing because of the pace of technological change and regulatory uncertainty.

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Although tactical media include alternative media, we are not restricted to that category. In fact we introduced the term tactical to disrupt and take us beyond the rigid dichotomies that have restricted thinking in this area for so long, dichotomies such as amateur vs. professional, alternative vs. mainstream. Even private vs. public.

Our hybrid forms are always provisional. What counts are

the temporary connections you are able to make. Here and now, not some vapourware promised for the future. But what we can do on the spot, with the media we have access to. Here in Amsterdam we have access to local TV, digital cities and fortresses of new and old media. In other places they might have theatre, street demonstrations, experimental film, literature, photography.

Tactical media's mobility connects it to a wider movement of migrant culture, espoused by the proponents of what Niel Ascherson described as the stimulating pseudo science of Nomadism. "The human race says its exponents are entering a new epoch of movement and migration. The subjects of history once the settled farmers and citizens, have become the migrants, the refugees the gastarbeiders, the asylum seekers, the urban homeless".

An exemplary example of the tactical can be seen in the work of the Polish artist Krzysztof Wodiczko who perceives how hordes of the displaced now occupy the public space of city squares, parks or railway station concourses which were once designed by a triumphant middle class to celebrate the conquest of its new political rights and economic liberties. Wodiczko thinks that these occupied spaces form new agoras which should be used for statements. "The artist", he says, "needs to learn how to operate as a nomadic sophist in a migrant polis".

Like other migrant media tacticians Wodiczko has studied the techniques by which the weak become stronger than the oppressors by scattering, by becoming centre-less, by moving fast across the physical or media and virtual landscapes. "The hunted must discover the ways become the hunter".

But capital is also radically de-territorialised. This is why we like being based in a building like De Waag, an old fortress in the centre of Amsterdam. We happily accept the paradox of 'centres' of tactical media. As well as castles in the air, we need fortresses of bricks and mortar to resist a world of unconstrained nomadic capital. Spaces to plan, not just improvise, and the possibility of capitalizing on acquired advantages has always been the preserve of 'strategic' media. As flexible media tacticians who are not afraid of power, we are happy to adopt this approach ourselves.

Recycling Modernity

Pirate electronic cultures in India

RAVI SUNDARAM

Marx, now long forgotten by most who spoke his name but a decade or two ago, once said the following in his brilliantly allegorical essay on the Eighteenth Brumaire of Louis Bonaparte. "Bourgeois revolutions...storm quickly from success to success; their dramatic effects outdo each; men and things set in sparkling brilliants; ecstasy is the everyday spirit; but they are short-lived; soon they have attained their zenith, and a long crapulent depression lays hold of society before it learns soberly to assimilate the results of its storm-and-stress period".

In Asia, reeling under the current crisis, the moment of ecstasy has long passed, and the 'long crapulent depression' is here to stay. India, a poor cousin of the East Asians, tried to ignore the crisis through its traditional west-centeredness. But the crisis has finally arrived in South Asia, the Indian rupee has dived steadily since last year and inflation is raging. But in the area of electronic capitalism, the mood is buoyant. Software stocks have risen 120 percent and soon software will become India's largest export.

Many fables have emerged as a response to the irruption of electronic capitalism in a country where 400 million cannot still read or write. The first fable is a domesticated version of the virtual ideology. In this Indianised version, propagated by the technocratic and programming elite, India's access to western modernity (and progress) would obtain through a vast virtual universe, programmed and developed by 'Indians'. The model: to develop techno-cities existing in virtual time with US corporations, where Indian programmers would provide low-cost solutions to the new global techno-space.

The second fable is a counter-fable to the first and quite familiar to those who live in the alternative publics of the net. This fable comes out of a long culture of Old-Left politics in India and draws liberally from 1960's dependency theory. The fable, not surprisingly, argues that India's insertion in the virtual global economy follows traditional patterns of unequal exchange. Indian programmers offer a low-cost solution to the problems of transnational corporations. Indian software solutions occupy the lower end of the global virtual commodity chain, just as cotton farmers in South Asia did in the 19th century, where they would supply Manchester mills with produce.

All fables are not untrue, some more 'true' than others. Thus the second fable claims, not unfairly, that most Indian software is exported, and there is very little available in the local languages (ironically the Indian language versions of the main programs are being developed by IBM and Microsoft!).

The alternative vision posed by the second fable is typically nationalist. Here India

would first concentrate on its domestic space and then forge international links. In a sense both fables suffer from a yearning for perfection. While the first promises a seamless transition to globalism, the second offers a world that is autarchic. Both are ideological, in the old, 19th century sense of the term, which makes one a little uncomfortable. "Down with all the hypotheses that allow the belief in a true world", once wrote Nietzsche, angrily.

There is no doubt that for a 'Third World' country, India displays a dynamic map of the new techno-cultures. The problem for both the fables mentioned above is that they remain limited to the elite domains of techno-space in India. This domain is composed of young, upper-caste, often English-speaking programmers in large metropolises, particularly emerging techno-cities like Bangalore and Hyderabad. This is the story that Wired loves to tell its Western audiences, but in a critical, innovative sense most of these programmers are not the future citizens of the counter net-publics in India.

What is crucial in the Indian scenario is that the dominant electronic public has cohered with the cultural-political imagination of a belligerent Hindu-nationalist movement. Hindu nationalism in India came to power using an explosive mix of anti-minority violence and a discourse of modernity that was quite contemporary. This discourse appealed to the upper-caste elites in the fast-growing cities and towns, using innovative forms of mechanical and electronic reproduction. Thus it was the Hindu nationalists who first used cheap audiocassette tapes to spread anti-Muslim messages; later giant video-scapes were used to project an aesthetized politics of hate. Some of the first Indian web sites were also set up by the Hindu nationalists. To this landscape has been added that terrifying 19th century weapon, the nuclear bomb.

This is an imagination that is aggressive, technologically savvy, and eminently attractive to the cyber-elites. The cyber-elites may be uncomfortable with the Hindu nationalists' periodic rhetoric of 'national sufficiency', but such language is hyper-political and has less meaning on the ground.

Outside the universe of the cyber-elite, is another one, which speaks to a more energetic technoculture. This is a world of innovation and non-legality, of ad-hoc discovery and electronic survival strategies. But before I talk about this, a story of my own.

Some years ago, I was on a train in Southern India where I met Selvam, a young man of 24, who I saw reading used computer magazines in the railway compartment. Selvam's story is fascinating, for it throws light on a world outside those of the techno-elite. Selvam was born in the temple town of Madurai in Southern India, the son of a worker in the town court. After ten years in school, Selvam began doing a series of odd jobs, learnt to type at a night school after which he landed a job at a typists shop. It was there that Selvam first encountered the new technoculture - Indian-style.

From the late 1980's, India witnessed a unique communicative transformation - the spread of public telephones in different parts of the country. Typically, these were not anonymous card-based instruments as in the West or other parts of the Third World, but run by humans. These were called Public Call Offices (PCOs). The idea was that in a non-literate society like India the act of telecommunication had to be mediated by humans. Typically literates and non-literates used PCOs, which often doubled as fax centres, photocopy shops and typists' shops. Open through the night, PCOs offered inexpensive, personalised

services that spread rapidly all over the country.

Selvam's typing shop was such a PCO. Selvam worked on a used 286, running an old version of WordStar, where he would type out formal letters to state officials for clients, usually peasants and unemployed. Soon Selvam graduated to a faster 486 and learnt programming by devouring used manuals, and simply asking around. This is the world of informal technological knowledge existing in most parts of India, where those excluded from the upper-caste, English-speaking bastions of the cyber-elite learn their tools.

Selvam told me how the textile town of Coimbatore, a few hours from Madurai set up its own BBS, by procuring used modems, and connecting them later at night. Used computer equipment is part of a vast commodity chain in India, originating from various centres in India but the main centre is Delhi.

Delhi has a history of single-commodity markets from the days of the Mughal Empire. Various markets would specialise in a single commodity, a tradition that has continued to the present. The centre of Delhi's computer trade is the Nehru Place market. Nehru Place is a dark, seedy cluster of grey concrete blocks, which is filled with small shops devoted to the computer trade. Present here are the agents of large corporations, as also software pirates, spare parts dealers, electronic smugglers, and wheeler-dealers of every kind in the computer world.

This cluster of legality and non-legality is typical of Indian technoculture. When the cable television revolution began in the 1990s, all the cable operators were illegal, and many continue to be so even today. This largely disorganised, dispersed scenario makes it impossible for paid cable television to work in India. This is a pirate modernity, but one with no particular thought about counter-culture or its likes. It is a simple survival strategy.

The computer trade has followed the pirate modernity of cable television. Just as small town cable operators would come to the cable market in the walled city area of Delhi for equipment, so people from small towns like Selvam would come to Nehru Place to source computer parts, used computers, older black and white monitors, and mother-boards out of fashion in Delhi.

This is a world that is everyday in its imaginary, pirate in its practice, and mobile in its innovation. This is also a world that never makes it to the computer magazines, nor the technological discourses dominated by the cyber-elite. The old nationalists and Left view this world with fascination and horror, for it makes a muddle of simple nationalist solutions. One can call this a recycled electronic modernity. And it is an imaginary that is suspect in the eyes of all the major ideological actors in techno-space.

For the Indian proponents of a global virtual universe, the illegality of recycled modernity is alarming and 'unproductive'. Recycled modernity, prevents India's accession to WTO conventions, and has prevented multinational manufacturers from dominating India's domestic computer market. For the nationalists, this modernity only reconfirms older patterns of unequal exchange and world inequality. In cyber-terms this means smaller processing power than those current in the West, lesser bandwidth, and no control over the key processes of electronic production.

I suspect that members of the electronic avant-gardes and the counter net-publics in the West will find recycled modernity in India baffling. For recycled modernity has no dis-

crete spaces of its own in opposition to the main cyber-elites, nor does it posit a self-defined oppositional stance. This is a modernity that is fluid and mocking in definition. But is also a world of those dispossessed by the elite domains of electronic capital, a world which possesses a hunter-gatherer cunning and practical intelligence.

The term 'recycling' may conjure up images of a borrowed, unoriginal modern. Originality (the eternal search for 'newness') was of course Baudelairian modernity's great claim to dynamism. As social life progressed through a combination of dispersion and unity, the Baudelairian subject was propelled by a search for new visions of original innovation, both artistic and scientific. A lot of this has fallen by the wayside in the past few decades, but weak impulses survive to this day.

It is important to stress too that recycled modernity does not reflect a thought-out post-modern sensibility. Recycling is a strategy of both survival and innovation on terms entirely outside the current debates on the structure and imagination of the net and technoculture in general. As globalists/virtualists push eagerly for a new economy of virtual space, and the nationalists call for a national electronic self-sufficiency, the practitioners of recycling keep working away in the invisible markets of India.

In fact given the evidence, it could even be argued that recycling's claim to 'modernity' is quite fragile. Recycling practices (today at least) lack modernity's self-proclaimed reflexivity, there is no sense of a means-ends action, nor is there any coherent project. This contrasts with the many historical legacies of modernity in India - one of which was Nehruvian. The technological side of this modernity was monumental and future-oriented; it spoke in terms of projects, clear visions, argued goals. And the favourite instrument of this modernity was a state Plan, borrowed from Soviet models. Nehruvian modernity has been recently challenged by Hindu nationalism, which too, has sought to posit its own claims to the modern, where an authoritarian state and the hegemony of the Hindu majority ally with a dynamic urban consumption regime.

Recycling practices' claim to modernity relies less on any architecture of mobility, but on an engagement with speed. Speed constitutes recycling's great reference of activity, centred on sound, vision and data. This is the pirate modern's 'eternal present' (Benjamin), one that is historically situated and mediated through various registers of difference. Speed in the time of the 'now' is the effort at acceleration propelled partly by global techno-capital. Temporal acceleration, which Reinhart Koselleck claims is one of modernity's central features, speaks to the deep yearnings of recycling's praxis. But this is a constantly shifting universe of adaptation to available tools of speed, the world *info-bahn* being but an infrequent visitor. Consider the practice of speed in a Third World country like India, where both the given-ness of access to the net and the purchase of processing power do not exist in simultaneity. They have to be created, partly through developing new techniques, and partly through breaking the laws of global electronic capital.

Recycling's great limitation in the computer/net industry is content. This actually contrasts with the other areas of India's culture industry - music and cinema. In the field of popular music, a pirate culture effectively broke the stranglehold of multinational companies in the music scene and opened up vast new areas of popular music that the big companies had been afraid to touch. Selling less from official music stores but from neighbourhood

betel-leaf (*paan*) shops, the pirate cassettes have made India into one of the major music markets in the world. In the field of cinema and television, content has never been a problem with a large local film industry that has restricted Hollywood largely to English-language audiences.

What accounts for this great limitation in the net and the computer components of recycled modernity? Recycling practices have, as we have shown, been very successful in expanding computer culture, by making it inexpensive and accessible. Most importantly recycling provided a practical education to tens of thousands of people left out of the upper-caste technical universities. But content providers are still at a discount. But perhaps not yet. The last time I went to Nehru Place I met a young man from Eastern India busy collecting Linux manuals. In a few years the recyclers, bored with pirating Microsoft ware, will surely begin writing their own.

Thinking through the Transitions: The City and the Pirate Modern

The emergence of a large 'pirate' electronic space in India gestures to a number of emergent practices in India in the 1980s and the 1990s. Though 'globalisation' is usually held out as a representational shorthand to capture this era, one can argue that in fact a number of complex, often unintended factors cohered in making the 'contemporary'.

Globalisation discourses in the public sphere have tended to focus on the state and its regulatory regime as a major reference point. While neo-liberal critics of the old regime of state-centred accumulation have pushed, often successfully, for a dismantling of state controls, critics from both the right and the left have tended to defend a nationalist economic model which would retain regulatory controls.

In fact, one of the most interesting aspects of the 1990s in India has been the dramatic retreat of the state at the level of the everyday. The magnified imaginary of the regulatory national state which informed the architecture of Nehruvianism is little in evidence, with a number of competing actors on the ground.

The 'everyday' is something that needs to be clarified here. The state, for example, continues to retain a close grip on the means of legal violence, and the regulatory model has not been allowed to disappear. In fact this model has been grafted onto a corrupt liberalisation regime to award the larger contracts in infrastructure.

I would like to speak of the 'everyday' as a space where practices of quotidian consumption, mobility, and struggle are articulated. It is this space that has been largely absent even in the cultural discourses on technological globalisation which have tended to look at elite domains of consumption and identity.

Looking back at the 1990s without the benefit of long-term hindsight, one can posit a number of preliminary formulations on the transitions of the decade. For clarity, I will limit my argument to the electronic everyday, the world of phones, computers, communication, television and music cultures.

The first would be that this everyday has emerged within a distinct urban space, in India's fast growing metropolitan centres and small towns. The notion of a distinct urban culture has lacked a public register in the Indian case, but this 'new' everyday has in a sense announced the arrival, albeit hesitantly, of a wide-ranging cluster of forms which we could

organise under the term 'urban experience'. Unknown to many of us who lived through the decade, the urban arrived in India in the 1990s. To be sure, the multiple crises of the Third World City are also reflected in this 'urban experience' - large-scale inequalities, violence, collapse of infrastructure, and the rise of elite suburbia based on automobile transport. In the midst of all this is a pirate electronic space speaking to the new phone, television, and communication cultures that offer a new mobility and employment to thousands in the grey economy.

Thus the second aspect of this everyday would be of its preponderant non-legality. Operating at the level of techno-cultural services to the vast majority of the population in cities and towns, the actors in this space have simply ignored the state as the regulator of everyday life. The thousands of small cable television operators; pirate audiocassette shop owners; and grey market computer companies have, with significant success evaded state controls on their operations. Part of the problem has been the state's slow response to impose regulatory mechanisms due to an inability in understanding the new technologies. But when regulation has come, success has been uneven, with only the larger firms falling in line.

The third aspect of the everyday is that the networks of quotidian consumption are dominated by those who, in the older Marxist language would be called 'petty-commodity-producers'. Much of 20th century Marxism from Lenin to the structuralists has puzzled over the reproduction of petty-commodity production in contemporary capitalism. Often this sector has been seen as a derivative category distinguished from the main dynamic of capitalist production, a form that is mired in 'circulation', not production. In fact in the expansion of the electronic everyday in India's cities in the 1990s, it is precisely this petty-commodity-sector that was crucial. Dominated by small entrepreneurs often focused in their own locality, this sector laid non-legal cable television networks, set up small PCO and computer shops, and distribution outlets of music cassettes. Along with this expansion came a host of other interventions in the locality: community advertising through inexpensive desktop-published flyers, and informal credit networks that give liquidity for low-cost consumption goods like black and white television sets sold in poor parts of the city.

Many years ago, before he joined the academic star-system, Jean Baudrillard wrote *The Mirror of Production*, a critique of Marxist political economy. Despite its problems, some of which anticipate his later shifts, Baudrillard's text nevertheless managed to point to the anthropomorphic core of Marxism's critique of political economy. Marxism's primacy of production (the 'realm of the concrete') led to a devaluing of the circuits of exchange and consumption. Exchange was always seen as exhibiting a lack, a space where labour-power was reified, and often generating 'false needs'. In the Indian case many of the critics of globalisation, by focusing on the elite consumption spaces (with their effects of waste and violence), tended to miss out on the profound transformations that were taking place in daily life in cities and towns. The Marxist/nationalist heritage with its hostility and moral suspicion towards consumption in general, played no small part in this.

The last feature of the electronic everyday has been the insertion of a spatio-temporal experience in the locality through speed. As urban neighbourhoods get connected through phone lines, television, and increasingly PCO/internet access points, we can speak of

flashes of what Paul Virilio has called the possibility of arrival without departure in late modernity. Virilio argues that temporal experiences have been fundamentally transformed with the arrival of the new telecommunication networks. Central to the transition is the transformation of modes of travel, thus for Virilio the audio-visual is the 'last vehicle' in modernity, after the railway, the automobile and the aeroplane. Further, a new form of chronopolitics is increasingly displacing the older forms of geo-politics.

Virilio's model is too extreme for the Indian case, but one can surely detect a transformation of the 'local' in the city with the spread of techno-cultural density. With the generalisation of modes of simultaneity through new technologies of transmission (live telecasts, sport events, long distance phone use by sections of the migrant poor), the 'locality' loses the old form of spatial security. The abolition of distance has of course been the great motive force of speed. In India this was pioneered by television (one can recall Heidegger's comments on television: "The peak of the abolition of every possibility of remoteness"), but also through the phone network.

The 'Asian' Modern?

Are pirate/recycling electronic cultures the defining mark of the 'Asian' engagement with contemporary modernity? 'Asia', is of course a violent abstraction, but one can surely detect the chain of non-legal electronic markets from Hong Kong to Shanghai, from Singapore to Delhi. Non-legality has been a major feature of all East Asian computer cultures where Western electronic commodities are re-sold in the world market, particularly the Third World. In the Indian case, the mimetic act is less punctual; the copy is not crucial to pirate culture. Rather, it is the insertion into the non-legal local, cultural commodity chains, and the unintended mocking of the state that define 'pirate' cultures in India. It is this mode that opens a wide spectrum of possibilities, many of which remain unrealised.



New Media: A User's Guide

LEV MANOVICH

How Media Became New

On August 19, 1839, the Palace of the Institute in Paris was completely full with curious Parisians who came to hear the formal description of the new reproduction process invented by Louis Daguerre. Daguerre, already well known for his Diorama, called the new process daguerreotype. According to a contemporary, "a few days later, opticians' shops were crowded with amateurs panting for daguerreotype apparatus, and everywhere cameras were trained on buildings. Everyone wanted to record the view from his window, and he was lucky who at first trial got a silhouette of roof tops against the sky". The media frenzy has begun. Within five months more than thirty different descriptions of the techniques were published all around the world: Barcelona, Edinburgh, Halle, Naples, Philadelphia, Saint Petersburg, Stockholm. At first, daguerreotypes of architecture and landscapes dominated the public's imagination; two years later, after various technical improvements to the process, portrait galleries were opened everywhere - and everybody rushed in to have their picture taken by a new media machine.

In 1833 Charles Babbage started the design for a device he called the Analytical Engine. The Engine contained most of the key features of the modern digital computer. The punch cards were used to enter both data and instructions. This information was stored in the Engine's memory. A processing unit, which Babbage referred to as a 'mill', performed operations on the data and wrote the results to memory; final results were to be printed out on a printer. The Engine was designed to be capable of doing any mathematical operation; not only would it follow the program fed into it by cards, but it would also decide which instructions to execute next, based upon intermediate results. However,¹ in contrast to the daguerreotype, not even a single copy of the Engine was completed. So while the invention of this modern media tool for the reproduction of reality impacted society right away, the impact of the computer was yet to be measured.

Interestingly, Babbage borrowed the idea of using punch cards to store information from an earlier programmed machine. Around 1800, J.M. Jacquard invented a loom which was automatically controlled by punched paper cards. The loom was used to weave intricate figurative images, including Jacquard's portrait. This specialized graphics computer, so to speak, inspired Babbage in his work on the Analytical Engine, a general computer for numerical calculations. As Ada Augusta, Babbage's supporter and the first computer programmer, put it, "the Analytical Engine weaves algebraical patterns just as the Jacquard loom weaves flowers and leaves". Thus, a programmed machine was already synthesizing images even before it was put to process numbers. The connection between the Jacquard loom and the Analytical Engine is not something historians of computers make much of, since for them image synthesis and manipulation represent just one application of the modern digital com-

puter among thousands of others; but for a historian of new media it is full of significance.

We should not be surprised that both trajectories - the development of modern media, and the development of computers - begin around the same time. Both media machines and computing machines were absolutely necessary for the functioning of modern mass societies. The ability to disseminate the same texts, images and sounds to millions of citizens thus assuring that they will have the same ideological beliefs was as essential as the ability to keep track of their birth records, employment records, medical records, and police records. Photography, film, the offset printing press, radio and television made the former possible while computers made possible the latter. Mass media and data processing are the complimentary technologies of a mass society.

For a long time the two trajectories developed in parallel without ever crossing paths. Throughout the nineteenth and the early twentieth century, numerous mechanical and electrical tabulators and calculators were developed; they were gradually getting faster and their use became more wide spread. In parallel, we witness the rise of modern media which allows the storage of images, image sequences, sounds and text in different material forms: a photographic plate, film stock, a gramophone record, etc.

Let us continue tracing this joint history. In the 1890s modern media took another step forward as still photographs were put in motion.² In January of 1893, the first movie studio - Edison's Black Maria - started producing twenty seconds shorts which were shown in special Kinetoscope parlors. Two years later, the Lumière brothers showed their new *Cinématographie* camera/projection hybrid first to a scientific audience, and, later, in December of 1895, to the paying public. Within a year, audiences in Johannesburg, Bombay, Rio de Janeiro, Melbourne, Mexico City, and Osaka were subjected to the new media machine, and they found it irresistible. Gradually the scenes grew longer, the staging of reality before the camera and the subsequent editing of its samples became more intricate, and the copies multiplied. They would be sent to Chicago and Calcutta, to London and St. Petersburg, to Tokyo and Berlin and thousands and thousands of smaller places. Film images would soothe movie audiences, who were too eager to escape the reality outside, the reality that no longer could be adequately handled by their own sampling and data processing systems (i.e. their brains). Periodic trips into the dark relaxation chambers of movie theatres became a routine survival technique for the subjects of modern society.

The 1890s was the crucial decade, not only for the development of media, but also for computing. If individuals' brains were overwhelmed by the amounts of information they had to process, the same was true of corporations and government. In 1887, the U.S. Census office was still interpreting the figures from the 1880 census. For the next 1890 census, the Census Office adopted electric tabulating machines designed by Herman Hollerith. The data collected for every person was punched into cards; 46,804 enumerators completed forms for a total population of 62,979,766. The Hollerith tabulator opened the door for the adoption of calculating machines by business; during the next decade electric tabulators became standard equipment in insurance companies, public utilities companies, railroads and accounting departments. In 1911, Hollerith's Tabulating Machine Company was merged with three other companies to form the Computing-Tabulating-Recording Company; in 1914 Thomas J. Watson was chosen as its head. Ten years later

its business tripled and Watson renamed the company the International Business Machines Corporation, or IBM.

We are now in the new century. The year is 1936. This year the British mathematician Alan Turing wrote a seminal paper entitled *On Computable Numbers*. In it he provided a theoretical description of a general-purpose computer later named after its inventor, the Universal Turing Machine. Even though it was only capable of four operations, the machine could perform any calculation which can be done by a human and could also imitate any other computing machine. The machine operated by reading and writing numbers on an endless tape. At every step the tape would be advanced to retrieve the next command, to read the data or to write the result. Its diagram looks suspiciously like a film projector. Is this a coincidence?

If we believe the word cinematograph, which means 'writing movement', the essence of cinema is recording and storing visible data in a material form. A film camera records data on film; a film projector reads it off. This cinematic apparatus is similar to a computer in one key respect: a computer's program and data also have to be stored in some medium. This is why the Universal Turing Machine looks like a film projector. It is a kind of film camera and film projector at once: reading instructions and data stored on endless tape and writing them in other locations on this tape. In fact, the development of a suitable storage medium and a method for coding data represent important parts of both cinema and computer pre-histories. As we know, the inventors of cinema eventually settled on using discrete images recorded on a strip of celluloid; the inventors of a computer - which needed much greater speed of access as well as the ability to quickly read and write data - came to store it electronically in a binary code.

In the same year, 1936, the two trajectories came even closer together. Starting this year, and continuing into the Second World War, German engineer Konrad Zuse had been building a computer in the living room of his parents' apartment in Berlin. Zuse's computer was the first working digital computer. One of his innovations was program control by punched tape. The tape Zuse used was actually discarded 35 mm movie film.³

One of the surviving pieces of this film shows binary code punched over the original frames of an interior shot. A typical movie scene - two people in a room involved in some action - becomes a support for a set of computer commands. Whatever meaning and emotion was contained in this movie scene has been wiped out by its new function as a data carrier. The pretence of modern media to create simulation of sensible reality is similarly cancelled; media is reduced to its original condition as information carrier, nothing else, nothing more. In a technological remake of the Oedipal complex, a son murders his father. The iconic code of cinema is discarded in favour of the more efficient binary one. Cinema becomes a slave to the computer.

But this is not yet the end of the story. Our story has a new twist - a happy one. Zuse's film, with its strange superimposition of the binary code over the iconic code anticipates the convergence which gets underway half a century later. The two separate historical trajectories finally meet. Media and computer - Daguerre's daguerreotype and Babbage's Analytical Engine, the Lumière *Cinématographie* and Hollerith's tabulator - merge into one. All existing media are translated into numerical data accessible for the computers. The

result: graphics, moving images, sounds, shapes, spaces and text become computable, i.e. simply another set of computer data. In short, media becomes new media.⁴

This meeting changes both the identity of media and of the computer itself. No longer just a calculator, a control mechanism or a communication device, a computer becomes a media processor. Before the computer could read a row of numbers outputting a statistical result or a gun trajectory. Now it can read pixel values, blurring the image, adjusting its contrast or checking whether it contains an outline of an object. Building upon these lower-level operations, it can also perform more ambitious ones: searching image databases for images similar in composition or content to an input image; detecting shot changes in a movie; or synthesizing the movie shot itself, complete with setting and the actors. In a historical loop, a computer returned to its origins. No longer just an Analytical Engine, suitable only to crunch numbers, the computer became Jacquard's loom - a media synthesizer and manipulator.

Principles of New Media

The identity of media has changed even more dramatically. In the following I tried to summarize some of the key differences between old and new media. In compiling this list of differences I tried to arrange them in a logical order. That is, the principles 3 and 4 are dependent on the principles 1 and 2. This is not dissimilar to axiomatic logic where certain axioms are taken as starting points and further theorems are proved on their basis.

1. Discrete representation on different scales.

This principle can be called 'fractal structure of new media'. Just as a fractal has the same structure on different scales, a new media object has the same discrete structure throughout. Media elements, be it images, sounds, or shapes, are represented as collections of discrete samples (pixels, polygons, voxels, characters). These elements are assembled into larger-scale objects but they continue to maintain their separate identity. Finally, the objects themselves can be combined into even larger objects – again, without losing their independence. For example, a multimedia 'movie' authored in popular Macromedia Director software may consist of hundreds of images, QuickTime movies, buttons, text elements which are all stored separately and are loaded at run time. These 'movies' can be assembled into a larger 'movie', and so on.

We can also call this 'modularity principle' using the analogy with structured computer programming. Structural computer programming involves writing small and self-sufficient modules (called in different computer languages routines, functions or procedures) which are assembled into larger programs. Many new media objects are in fact computer programs which follow structural programming style. For example, an interactive multimedia application is typically programmed in Macromedia Director's Lingo language. However, in the case of new media objects which are not computer programs, an analogy with structural programming still can be made because their parts can be accessed, modified or substituted without affecting the overall structure.

2. Numerical representation. Consequences:

2.1. Media can be described formally (mathematically). For instance, an image or a shape can be described using a mathematical function.

2.2. Media becomes a subject to algorithmic manipulation. For instance, by applying

appropriate algorithms, we can automatically remove 'noise' from a photograph, alter its contrast, locate the edges of shapes, and so on.

3. Automation.

Discrete representation of information (1) and its numerical coding (2) allow to automate many operations involved in media creation, manipulation and access. Thus human intentionality can be removed from the creative process, at least in part.

The following are some of the examples of what can be called 'low-level' automation of media creation, in which the computer modifies (i.e. formats) or creates from scratch a media object using templates or simple algorithms. These techniques are robust enough that they are included in most commercial software: image editing, 3-D graphics, word processing, graphic layout. Image editing programs such as Photoshop can automatically correct scanned images, improving contrast range and removing noise. They also come with filters which can automatically modify an image, from creating simple variations of colour to changing the whole image as though it was painted by Van Gogh, Seurat or other brand-name artist. Other computer programs can automatically generate 3-D objects such as trees, landscapes, human figures and detailed ready-to-use animations of complex natural phenomena such as fire and waterfalls. In Hollywood films, flocks of birds, ant colonies and even crowds of people are automatically created by AL (artificial life) programs. Word processing, page layout, presentation and Web creation software comes with 'agents' which offer the user to automatically create the layout of a document. Writing software helps the user to create literary narratives using formalized highly conventions genre convention. Finally, in what maybe the most familiar experience of automation of media generation to most computer users, many Web sites automatically generate Web pages on the fly when the user reaches the site. They assemble the information from the databases and format it using templates and scripts.

The researchers are also working on what can be called 'high-level' automation of media creation which requires a computer to understand, to a certain degree, the meanings embedded in the objects being generated, i.e. their semantics. This research can be seen as a part of a larger initiative of artificial intelligence (AI). As it is well known, AI project achieved only very limited success since its beginnings in the 1950s. Correspondingly, work on media generation which requires understanding of semantics is also in the research stage and is rarely included in commercial software. Beginning already in the 1970s, computers were often used to generate poetry and fiction. In the 1990s, the users of Internet chat rooms became familiar with bots – the computer programs which simulate human conversation. Meanwhile, the researchers at New York University showed the systems which allow the user to interact with a 'virtual theatre' composed of a few 'virtual actors' which adjust their behaviour in real-time. The researchers at MIT Media Lab demonstrated 'smart camera' which can automatically follow the action and frame the shots given a script. Another Media Lab project was ALIVE, a virtual environment where the user interacted with animated characters. Finally, Media Lab also showed a number of versions of a new kind of human-computer interface where the computer presents itself to a user as an animated talking character. The character, generated by a computer in real-time, communicates with user using natural language; it also tries to guess user's emotional state and to adjust the

style of interaction accordingly.

The areas of new media where the average computer user encountered AI in the 1990s was not, however, human-computer interface but computer games. Almost every commercial game includes a component called AI engine. It stands for part of the game's computer code which controls its characters: car drivers in a car race simulation, the enemy forces in a strategy game such as *Command and Conquer*, the single enemies which keep attacking the user in first-person shooters such as *Quake*. AI engines use a variety of approaches to simulate intelligence, from rule-based systems to neural networks. The characters they create are not really too intelligent. Like AI expert systems, these computer-driven have expertise in some well-defined areas such as attacking the user. And because computer games are highly codified and rule-based and because they severely limit possible behaviours of the user, these characters function very effectively. To that extent, every computer game can be thought off as being another version of a competition between a human chess player and a computer opponent. For instance, in a martial arts fighting game, I can't ask questions of my opponent, nor do I expect him to start a conversation with me. All I can do is to 'attack' him by pressing a few buttons; and within this severely limited communication bandwidth the computer can 'fight' me back very effectively. In short, computer characters can display intelligence and skills only because they put severe limits on our possible interactions with them. So, to use another example, once I was playing against both human and computer-controlled characters in a VR simulation of some non-existent sport game. All my opponents appeared as simple blobs covering a few pixels of my VR display; at this resolution, it made absolutely no difference who was human and who was not. The computers can pretend to be intelligent only by tricking us into using a very small part of who we are when we communicate with them.

Along with 'low-level' and 'high-level' automation of media creation, another area of media use which is being subjected to increasing automation is media access. The switch to computers as a means to store and access enormous amount of media material, exemplified by the Internet's 'media assets' distributed across numerous Web sites, creates the need to find more efficient ways to classify and search media objects. Word processors and other text management software for a long time provided the abilities to search for specific strings of text and automatically index documents. In the 1990s software designers started to provide media users with similar abilities. Virage introduced Virage's VIR Image Engine which allows the user to search for visually similar image content among millions of images as well as a set of video search tools to allow indexing and searching video files. By the end of the 1990s, the key Web search engines already included the options to search the Internet by specific media such as images, video and audio.

The Internet also crystallized the basic condition of the new information society: overabundance of information of all kind. One response was the popular idea of 'agent' software. Some 'Agents' are supposed to act as filters which deliver small amounts of information given user criteria. Others are allowing users to tap into the expertise of other users, following their selections and choices. For example, MIT Software Agents Group developed such agents as BUZZwatch which "distills and tracks trends, themes, and topics within collections of texts across time" such as Internet discussions and Web pages; Letizia, "a

user interface agent that assists a user browsing the World Wide Web by... scouting ahead from the user's current position to find Web pages of possible interest"; Footprints which "use information left by other people to help you find your way around".

At the end of the twentieth century, the problem was no longer how to create a new media object such as an image; the new problem was how to find the object which already exists somewhere. That is, if you want a particular image, chances are it already exists somewhere but it may be easier to create one from scratch than to find the one already stored. Historically, we first developed technologies which automated media construction: a photo camera, a film camera, a tape recorder, a video recorder, etc. These technologies allowed us, over the course of about one hundred and fifty years, to accumulate an unprecedented amount of media materials: photo archives, film libraries, audio archives... This then led to the next stage in media evolution: the need for technologies to store, organize and efficiently access these media. The computer provided a basis for these new technologies: digital archives of media; hyperlinking, hierarchical file system and other ways of indexing the digital material; and software for content-based search and retrieval. Thus automation of media access is the next logical stage of the process which was already put into motion when a first photograph was taken.

4. Variability

A new media object (such as a Web site) is not something fixed once and for all but can exist in different (potentially infinite) versions. This is another consequence of discrete representation of information (1) and its numerical coding (2).

Old media involved a human creator who manually assembled textual, visual or audio elements (or their combination) into a particular sequence. This sequence was stored in some material, its order determined once and for all. Numerous copies could be run off from the master, and, in perfect correspondence with the logic of an industrial society, they were all identical. New media, in contrast, is characterized by variability.

Stored digitally, rather than in some permanent material, media elements maintain their separate identity and can be assembled into numerous sequences under program control. At the same time, because the elements themselves are broken into discrete samples (for instance, an image is represented as an array of pixels), they can be also created and customized on the fly.

The logic of new media thus corresponds to the post-industrial logic of 'production on demand' and 'just in time' delivery which themselves were made possible by the use of digital computers and computer networks in all stages of manufacturing and distribution. Here 'culture industry' is actually ahead of the rest of the industry. The idea that a customer determines the exact features of her car at the showroom, the data is transmitted to the factory, and hours later the new car is delivered remains a dream, but in the case of computer media, it is reality. Since the same machine is used as a showroom and a factory, and since the media exists not as a material object but as data which can be sent through the wires with the speed of light, the response is immediate.

Here are some particular cases of the variability principle:

4.1. Media elements are stored in a media database; a variety of end-user objects which vary both in resolution, in form and in content can be generated, either beforehand,

or on demand, from this database.

4.2. It becomes possible to separate the levels of 'content' (data) and interface. A number of different interfaces can be created to the same data. A new media object can be defined as one or more interfaces to a multimedia database.

4.3. The information about the user can be used by a computer program to automatically customize the media composition as well as to create the elements themselves. Examples: Web sites use the information about the type of hardware and browser or user's network address to automatically customize the site which the user will see; interactive computer installations use information about the user's body movements to generate sounds, shapes, or control behaviours of artificial creatures.

4.4. A particular case of 4.3 is branching-type interactivity. (It is also sometimes called menu-based interactivity.) The program presents the user with choice(s) and let her pick. In this case the information used by a program is the output of user's cognitive process (rather than the network address or body position).

4.5. Hypermedia: the multimedia elements making a document are connected through hyperlinks. Thus the elements and the structure are separate rather than hard-wired as in traditional media. By following the links the user retrieves a particular version of a document. (World Wide Web is a particular implementation of hypermedia in which the elements are distributed throughout the network).⁵

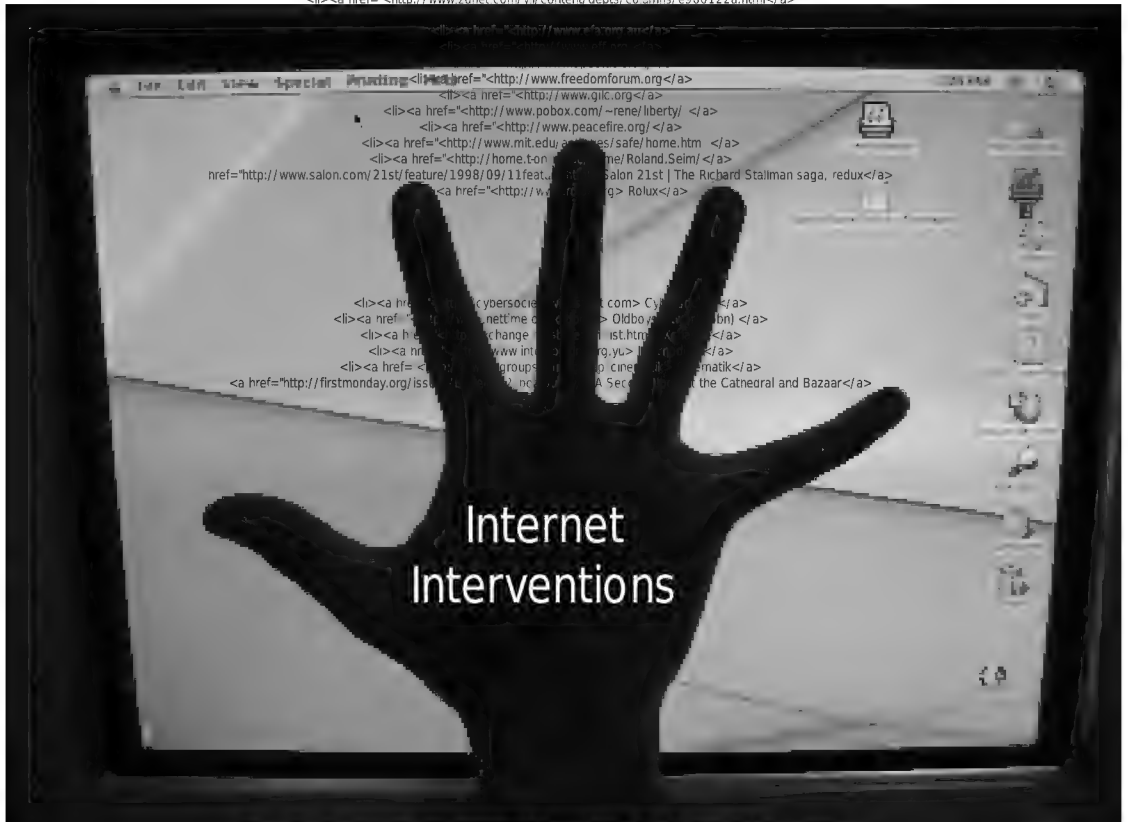
Out of these four principles, the principle of variability may be the most interesting. On the one hand, such popular new media forms as branching-type interactivity and hypermedia can be seen as particular instances of variability principle. On the other hand, this principle demonstrates how the changes in media technologies are closely tied up with changes in social organization. Just as the logic of old media corresponded to the logic of industrial mass society, the logic of the new media fits the logic of the post-industrial society of personal variability. In industrial mass society everybody was supposed to enjoy the same goods - and to have the same beliefs. This was also the logic of media technology. A media object was assembled in a media factory (such as a Hollywood studio). Millions of identical copies were produced from a master and distributed to all the citizens. Broadcasting, film distribution, print technologies all followed this logic.

In a post-industrial society, every citizen can construct her own custom lifestyle and 'select' her ideology from a large (but not infinite) number of choices. Rather than pushing the same objects/information to a large group, marketing tries to target each individual separately. The logic of new media technology reflects this new condition perfectly. Every visitor to a Web site automatically gets her own custom version of the site created on the fly from a database. Every hypertext reader gets her own version of the text. Every viewer of an interactive installation gets her own version of the work. And so on. In this way new media technology acts as the most perfect realization of the utopia of a perfect society composed from unique individuals. New media objects assure the users that their choices - and therefore, their underlying thoughts and desires - are unique, rather than pre-programmed and shared with others. As though trying to compensate for their earlier role in making us all the same, today descendants of the Jacquard's loom, The Hollerith tabulator and Zuse's cinema-computer are now working to convince us that we are all different.

NOTES

- 1 Babbage designed the hardware while Ada Augusta, the Countess of Lovelace and the daughter of Lord Byron, was busy writing the software for the Engine.
- 2 In the preceding decades, and the one which immediately followed the 1890s, most other modern media machines were developed, enabling the recording of still images of visible reality (photography) and of sound (the phonograph), as well as real-time transmission of images and sound (television, the fax, telephone and radio). Yet, more than any of these other inventions, it was the introduction of cinema which impressed itself most strongly on public memory. The year which we remember and celebrate is 1895; it is not 1875 (first television experiments of Carey) or 1907 (the introduction of the fax). Clearly, we are more impressed (or at least, we have been until recently, until the Net) with modern media's ability to record aspects of sensual reality and then use these recordings to simulate it for our senses, than with its real-time communication aspect. If we had a choice to be among the Lumiere's first audience or be the among the first users of the telephone, we would choose the former. This of course is not unrelated to the fact that the new recording abilities led to the development of new media arts in the way that real-time communication did not. The fact that aspects of sensible reality can be recorded and that these recordings can be later combined, re-shaped and manipulated - in short, edited - made possible the new arts which were soon to dominate the twentieth century. Despite persistent experiments of the avant-garde artists with modern technologies of real-time communication - radio in the 1920s, video in the 1970s, Internet in the 1990s - the ability to communicate over a physical distance in real-time by itself did not seem to inspire fundamentally new aesthetic principles the way film or tape recording did.
- 3 Like every other mass produced object of the industrial age, film copies would often end up as waste, piling up in trash cans outside of movie studios. It was probably there that a young German engineer, Konrad Zuse, found material essential for his new invention.
- 4 But when they finally meet for good, this sets up a cultural process whose true scale and consequences we can only begin to imagine. What we witness, today, is its beginning: a translation of all existing media into numerical data accessible for the computers. Graphics, moving images, sounds, shapes, spaces and text become computable, i.e. simply another set of computer data. In short, media becomes new media.
- 5 In summary, new media represents a convergence of two separate histories. It is a convergence of media technologies and of digital computing. It is important to notice that this convergence involves two distinct steps. Media representations are translated from analog to a digital code. This turns them into numerical data which can be subjected to any and all operations which computers are capable of. There are two separate ideas at work here: digital code and computation. New media involves two distinct ideas, that of the digital and that of computation. It refers to two distinct ideas: numerical (discrete) representation and a computer (a device for calculation). The two do not imply each other; for instance, analog computers can operate over continuous data. However, since digital media in reality most often is used in conjunction with computers, the two ideas became conflated. Still, the set of qualities, which we attribute to digital media, is eclectic, referring to both the idea of digital coding and to the idea of computation. However, the idea of a digital by itself can hardly separate new media from the old. What is essential is not that media is simply translated into a digital code but that through this translation it becomes subject to computation. In view of this, the term 'digital media' which became popular in the 1990s is unfortunate, since it only reflects one idea - that of digitization. A better term would be 'computer media' or, even better, 'programmable media'.

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Development, Ethical Trading, and Free Software
 Debian GNU/Linux - A Social Contract
 Free Software Licensing
 The FreeBSD Project
 The NetBSD Project
 OpenBSD
 FreeDevelopers.net A company of free developers by free developers, for a free world
 Linux Documentation Project
 Ibiblio.org
 Samba Web Pages
 Linuxartist.org
 GNOME - Computing made easy
 K Desktop Environment Home (kde.org)
 themes.org - Interface Enhancement
 DaveCentral Shareware, Freeware, Demos and Betas
 Linux Links - The Linux Portal Site
 Review of Operating Systems

The Rise and Fall of Dotcom.mania

Cyberculture in the Internet Economy

GEERT LOVINK



Old Hat, New Economy

With the NASDAQ having lost half its value, tech stock owners wished Baudrillard's saying "The Year 2000 did not happen" had come true. Arguing from a perspective of critical cyberculture, there is little reason to celebrate the downfall of Internet start-ups. Populist anti-speculative sentiments and moral anti-capitalist stands are on the rise. History is not on the side of those who predicted the failure of the New Economy and, for whatever reason, stayed out of business. Let's leave the bashing of failed millionaires to others ("Dotcom is the weakest link, goodbye"). No matter how silly and fraudulent the dot.bombs business plans were, what will replace them is certainly not going to be any better. The dialogue with techno-anarchists and libertarian entrepreneurs is a fierce one, the one with corporate media and IT-moguls non-existing. Those who care about civil liberty, open standards and social change towards an innovative, technological culture through software development, investment strategies and cultural activities should prepare for a phase of fierce market nihilism. The festive part of the Internet economy is over. An age of normalization is setting in, necessary to make up for losses and failed investments.

Forget business magazines such as *Red Herring*, *Fast Company*, *Wired* and *Business 2.0* and their religious positivism. Perhaps with the exception of the www.thestandard.com, the Watchtowers of the New Economy have willingly been blind after what happened in the aftermath of the April 2000 NASDAQ downfall. The resemblance with Communist party news media in the former Eastern Bloc is remarkable: organized optimism, neglect of basic figures mixed with portraits of heroes, achieving miraculous breakthroughs at the forefront of financial schemes. Dotcom propagandists keep on repeating their mantra of bankruptcy as a spiritually cleansing experience, hoping that the storm won't be that bad after all. Venture Capital money moved on from unsafe, open and free web to the next big thing, the proprietary wireless systems where at least a payment system is already in place. Yet, the world of venture capital has remained rigorous as ever, blaming "over publicized dotcom

failures and an unfriendly stock market" (www.tornado-insider.com) for the overall malaise.

There won't be many innovative Internet ventures any time soon. What is actually happening is the integration of the start-up work force and expertise within the existing corporate structures. No spectacular takeovers or mergers. No sudden crashes or massive firm closures. Some will call it a necessary restructuring of the sector. I would rather call it a process of silent (dis)integration, disrupted and exhilarated by bankruptcies and scandals. It will take a while to unravel the dark side of the electronic gold rush. Countless dirty deals are being uncovered made by lawyers, stockbrokers and accountants who all had multiple roles in the IPO mania with firms acting as auditors, advisers and independent experts (see the *Australian Financial Review* of 28 & 29 December 2000 who surveyed 106 floats over a two year period).

New cynicism is setting in. Under the title "Pinnacles and Pitfalls of the Internet" Joseph Nocera and Tim Carvell sum up "50 sharp lessons" (©*Fortune*, reprinted in *Australian Financial Review*, 29.12.2000). Many of them do not go any further than stating the obvious. "A website is not the same as a business", "Banner ads don't work", "Nobody wants to buy shampoo over the Internet", and "Physical stores are wonderful things". The one-liners are not at all ironic nor show any proof of vision to deal with the current setbacks. Rather, the business paparazzi is armouring itself for a backlash campaign against the entrepreneurial big mouths. "Youth is not the same thing as intelligence", "Cool is not the same as profitable", "Day trading is a sucker's game", and "The Internet has been a gift to charlatans, hypemeisters, and merchants of vapours." The mood is getting resentful: "If you have to ask 'What's the business model?' there shouldn't be any stock" and "People who left good jobs for speculative options got what they wanted". In the same way as all these virtues were praised one year ago they are now denounced. No sign of anti-cyclical intelligence here.

In good or bad times, Internet business consultants are always right. In rosy times they will predict infinite growth of stock values because of predicted hyper-growth. In times of recession they will blame the very same market they trusted a few months earlier. Is there anyone to blame here, one wonders? The experts of Andersen Consulting, Deloitte, etc. seem to get away with everything. There is no accountability whatsoever. It is like suing the weatherman for a bad prediction. How about bringing Internet gurus to court, charging them for ignoring key business figures, selling unrealistic high price-earnings multiples?

In the Internet economy, technological change is a complex, dynamic, integrated system. It's direction is increasingly dictated by financial markets, which are no longer just 'feeding' the IT industry with capital from the outside. Investment decisions of venture capitalists direct the way in which technology is being developed, thereby effecting the course of technology. A cloudy, dense information structure is intrinsically intertwined with its object (Internet technology, wireless applications, telecoms, hardware etc.). This hypersensitive environment is also open for a variety of factors such as currency exchange rates, interest rates, and even, to some extent domestic and foreign policy. And let's not forget the prize of crude oil. Factors which all define the technological state of the art itself as parameters, constantly changing settings which have to be closely monitored. The media, be it television, print magazines, or Internet, are in constant feedback with both the finan-

cial markets and the technological sector, becoming one big PR marketing machine. Competition does not lead into diversification of opinions and formats. Within this turbulent climate of 'digital convergence' there is little interest in independent reporting and critical research in new media and IT development.

Sloganism:

"All hope, design could bring salvation should be eliminated". (Genc Grevia); "Don't stop thinking about the Internet"; "You are only human once"; "Open Monopolies for an Open Society"; "After the Culture Clash" (book title); "Virtual Companies are Paper Tigers"; "The Global Province"; and rhetoric after Heidegger: "Why do we remain in the Internet?"; "Virtual Failures" (conference title); "Virtual Empire: Its Golden Age, Conceptual Renaissance, Nihilistic Moment"; "I have written six theories on cybercities. They can't all be true". (Johan Sjerpstra); "We will be where the consumers are". (New Chinese saying); "The Will to Design: Overcoming Entertainment"; "Resistance is Fertile" (T-shirt); "Decide or Consume"; "Build your own Internet Observatory" (Toolkit); "Extend your cozy feeling" (Baleno); "Have you heard about Minispace?"; "Revolution 'R' Us"; "No reconciliation with artificial nature" (graf-fiti); "Lead me to the wrong side of virtuality" (song).

'Napster This!'

But does art really want to be free? The decentralized exchange of music files through the so-called Napster (www.napster.com) service has put the recording industry upside down. While the 'Metallica' court case is still on, Bertelsmann and a few other record labels recently announced it had made deals with Napster. By stepping up their Zuckerbrot und Peitsche (punish and reward) strategy, the media giants managed to even more increase their pressure on Napster to alter its model of free content exchange into a subscription based, money making operation. Whereas post-Napster initiatives such as Gnutella and Freenet are gradually establishing themselves as true 'peer-to-peer' models without any central server, MP3.com announced it would pay back the recording industry hundreds of millions of dollars for loss of copyright.

The overall picture here seems to be a confusing one. Obviously, some very real contradictions within global capitalism are on a sharp increase, without a synthesis or compromise in sight. There is no such thing as a Digital Third Way. Whereas more and more data are floating over the networks, there is a similar hyper growth of data stored away behind password protected IP-walls. The pressure on the New Economy to finally come up with a real cash flow bumps into the marketing tactics of the very same breed of people who put out free content, attracting new audiences in order to establish their customer base. Two contradictory strategies, coined by Arthur Kroker as the 'facilitating' and the 'harvesting' colliding in a spectacular fashion.

Artists seem to be as confused, and divided, as anyone else. No right or wrong here. There is not even a common sense liberal-Leftist position. Debates on the international mailinglist nettime, for instance, did not show any direction or conclusion over the Napster issue. You can follow the thread in the www.nettime.org archive, starting on July 23, 2000 with a posting called "Terror in Tune Town". Against the aggressive libertarian stand

("Information wants to be free") which is embedding itself into code and network architecture, there is the legitimate call of those who have to make a living out of that very same piece of information hackers and others are putting out into the digital public domain. Anyone ever heard that art wants to be free? No. Art wants to be paid for. Lots of money, if possible. Or a decent price, depending on one's expectations what's life is all about. Code writers are taking the avant-garde position here. Those who write the software are creating facts here, not the artists themselves. Nor are other 'content' producers such as journalists, critics or activists. They can sadly only discuss the consequences of the technologies. Lawyers could do some harm to the further spreading of peer-to-peer software, but probably not much. The situation seems pretty much out-of-control, with the average user as the one who is benefiting most.

One 'lesson' disturbed the traditional business community most: "Give stuff away is an easy way to make friends and a lousy way to make money". Related is the secret wish of many CEOs that "some day e-mail will not be free", resulting in the statement "the person to figure out e-cash will be a billionaire". (thereby showing that this duo hasn't learned a thing from dotcom.mania). The proposal of Esther Dyson, J.P. Barlow and others to build the Internet economy on the principle of the gift, may have worked in the mid and late nineties. Free information, entertainment (mp3), access, and at some stage even free hardware created the critical mass of users for business to step in. In retrospect we can call this the age of hyper growth (1995-2000). Venture capitalists would finance anything as long as it was growing. That is, growth measured in click rates. During this first Internet recession there is a tendency to focus on core information technologies, thereby excluding content and even services. Any business which is using the Net as a mere marketing tool to sell non-tech items such as real-estate, pet food or wine will face hard times.

The magic year 2000 turned out to be a turning point. The internal contradiction between the fascinating 'luring' aspect of the free and the pressure on Internet companies to come up with real revenues hit the surface. Many start-ups found themselves in a downward spiral after the first quarter, with tax payments coming up faced with high bills for marketing (billboards, TV commercials and adds in other 'old' media) and, first rounds of venture capital having dried up. And costs have proven to grow exponentially: "It takes \$10 to create a technology, it costs \$100 to create a product and \$1000 to take it to market with distributor channels and marketeering materials". (John Chambers) The burn rate of concepts, friendships, health and communities has been a high one. With stock options reaching negative territory the organized fun is over now. It is time to think security again and put the fairytales of risk taking heroes aside for a while.

In 2000 'e-commerce' was scheduled to break through. A certain percentage of the created client base was supposed to reach the trust level of buying goods and services online. As an avant-garde of the free grazing herd, early adapters would pass the dam, creating a true Internet economy, based on real dollars, extracted from the old economy, inserted in the Net via the credit card system. Presuming that the model of the early-mid nineties of early users of the Net would repeat itself (the ISP-phase), thousands of businesses were hastily founded, first in the United States, soon followed by like-minded entrepreneurs in Europe and Asia, ready to receive the first electronic consumers. Some indeed

showed up. The 'pro-sumers' purchased a bit here and there (mainly software and books) but not enough to match the wildly optimistic predictions. The B2B-model (business-to-business) was introduced as a hype to compensate for the not fast enough growing business-to-consumer revenue stream. The hugely expensive development costs for B2B were projected to be profitable only in the long run and only postponed the upcoming flaw in demand of IT products and services.

By mid 2000 e-commerce was dead, meaning that its modest growth had proven unable to reach the predicted revenues the overall Internet economy needed to go to the next round of hyper growth (and VC funding). The dependency of the IPO-ed companies of their overvalued stocks was the main reason why the downward spiral after April 2000 set in so rapidly. The speed religion of the New Economy ("Not the big will eat the small but the fast will eat the slow") turned against itself: the higher you fly the deeper you fall, with the unfortunate, some will say inevitable result that the mammoth chewed the hasty.

Most likely to survive are the companies in the shadow, not listed on the stock market, with a sustainable growth model and real revenues, or even profits. "Cash will be king" as Shannon Henry stated in his 2001 outlook in the Washington Post (December 28, 2000): "The gleeful, easy, everyone-is-getting-funded attitude has been replaced by skepticism, gloom and massive reversal of fortune. The shakeout will continue until many companies' pockets are completely emptied". After a golden age of fifteen years we would come under the law of diminishing profit, as Brad DeLong stated back in 1997 (see: www.rewired.com).

The Napster craze of mid 2000 did not help to establish the badly needed stream of real dollars. (see www.napster.com) According to the prophets of Free, services such as Napster would crumble the old, in this case the recording industry, and install a new economy, with new rules and new players. The first may have happened to some extent but the latter certainly is long way away. E-commerce offspring from Napster, Gnutella, Freenet and other peer-to-peer networks has been disappointingly low. Even though sales may have been substantial in individual cases for independent artists offering work for free on the web, the overall economic situation of 'content providers' remains bleak. With no e-cash system in place users will only pay for essential information such as financial newsletters. First attempts to sell PDF documents online such as www.soapbox.com remain promising but have not made it outside of the banking and finance sector.

First it was software code, then the written word (essays, articles) which have gotten 'napsterized'. With the increased capacity of chips and pipes, technology then enabled us to turn music into files of a reasonable size. The MP3 files Napster users download seem really tiny by today's standard. It will only take a few years from now until the free exchange of compressed feature MP4 films with a fabulous screen quality will be a fact. Watermarks against copying could split the consumer base in two - with the ones who don't care about copyright on the one and those who are not that techno savvy on the other hand. This is a similar split known in the case of software. Those who are somewhat clever and think they can get away with pirated software will do so, even state in public that they do not want to further financially support the Microsofts. The innocent majority will by and large agree with this but won't know what to do, until a Napster kind of service enters the stage. It will offer free video porn, software, exclusive financial information, anything people now pay a lot of

money for.

In this situation artists who have withdrawn (or stayed) into the world of the material objects seem to be the only one not being effected by the inevitable napsterization of all 'content'. All the rest will be drawn in endless fights between the freedom of distribution and intellectual property.

'The vista, not the endpoint...'

For those allergic to US-American corporatism, the above-sketched reduction of Internet to a money machine might be depressing. Time to withdraw and resign? Ignore the overall image and continue to work on what needs to be done? Sit on top of the hill, and watch the state-monopoly capitalist destruction of the Net pass by? Is any utopian vision of an equal (re)distribution of knowledge, resources and power not in immediate danger of being incorporated by the same forces, this time with a 'Third Way' label stuck on it? We may not wish to fall back into anti-American luddite positions, nor sell cheap, outworn solutions which may, or may not, have appealed to the early adopters, the so-called post-89 Generation X, five or ten years ago.

According to Hannah Arendt, this conflict, the one between utopia and negativism, cannot and should not be solved. To paraphrase Arendt's reading of Plato's Republic, we could say that we should not seek the immediate beauty of new media concepts. The Internet must be chaste and moderate if one is to sublimate his or her erotic drive and profit from it. If we follow the analogy further, cyberspace should supplement its knowledge of Ideas with knowledge of the shadow of the realm of the Digital. If the Internet is to illuminate the darkness, not add to it, it must begin by taming its own utopian promises. The (self)containment of cyberspace should be rooted in a call for responsibility, not in passively delegating power to the state or the market.

One could call this strategy the 'civic hedging' of cyberspace, *das Aufhalten des Netzes* in German. In times of hyper growth, the proposal to hold up the development of a technology may sound conservative, but its aim is to protect it from being reduced to one single quality, to one single idea - shopping mall and money machine, total work and total entertainment environment. This first of all means upholding the childish dreams, with its seamless possibilities of space after space, thrilling experiences, and fortunes to be made. The aim here is to prevent Internet from turning into a nightmare (from which it then has to awake).

In order to achieve this, neither does the utopian vision have to be eliminated, nor do we need to withdraw onto the apocalyptic pole, which states that the world and its network will collapse anyhow - with or without our interference. The conflict between utopia and negativism Hannah Arendt is aiming at, needs to be played out. The deeper we are drawn into the virtual, the more there is a need to stage its inherent paradoxes and contradictions. A willing suspension of belief!

In the pragmatist view, principles are 'abbreviations of past practices'. The same can be said of the Internet dictum of open architecture, decentralized structure, copyleft etc. These features, formulated under the spell of post-68, Vietnam and the Cold War, need to be historically framed, in order not to be turned into a crusty, moral belief system. It would

be naive to hope for a computer network 'which cannot be used by the political right, one which will lend itself only good causes'.

I am following here what Richard Rorty is writing in his book *Philosophy and Social Hope*. Pragmatists, according to Rorty, do not believe there is an essential essence, a "way things really are", beyond all appearances. This is doubly true for the 'essence' of the Internet, which in pragmatic terms is neither good, (liberated by the free market) or evil (dominated by monopoly corporations). Rather, Rorty suggests that we try and distinguish between descriptions (of the Internet, for example) "which are less useful and those which are more useful". Concepts describe things, rather than reveal their essence.

We can think about this in relation to the question of the metaphors applied to the internet. Some of them are useful and productive for a while, whereas in other contexts they may become meaningless and boring. We can think of the city metaphor, references to the (virtual) body, or, to the Internet as a safe haven for the Self and other spiritual motives. The future, according to Rorty, should not conform to a plan. Rorty's hero John Dewey formulates 'growth' as the only moral end. Pragmatists reject any teleology and hope that the future (of the Internet, for example) "will astonish and exhilarate. The vista, not the endpoint, is what matters". If we do not impose absolute values upon the directions new media might take, more realms of possibilities might reveal themselves. It is the role of theory to draw these images out, not to impose them on reality.



Internet Nation

The Case of Cyber Yugoslavia (www.yuga.com)

TOMISLAV LONGINOVIC

The founding law of Cyber Yugoslavia (CY) opens up a possibility of constant fluid transition to this imaginary state: "The Constitution of Cyber Yugoslavia is variable". The variability consists in the ability of 'anyone' to change it, to rewrite it through a 'public vote' (Article 1, CY). This virtual vision of utopian democracy relies on at least a partial extra-territoriality of its citizens: only 25.22% of its 13,150 citizens reside on the territory of the present day state-in-deconstruction of FRY (Federal Republic of Yugoslavia), while the rest are scattered in thirty seven countries around the globe. The variability of the law that founds the basic tenets of the communal in the imagined community of post-Yugoslavs is the encounter defined away from the sacrificial logic of the nation state which resides in the order of One and Only (ekhad, Hebrew).

According to Aleida Assmann, our universalist conceptions of culture derive from this fixation on the figure of divine provenance that dictates the sense of an exclusive outcome regarding the conduct of life and the nature of reality. The Tower of Babel legend is symptomatic of this projected desire for oneness that underpins most monotheistic concepts of community: "In the original state, the whole earth was united in one language, and this language consisted of one (= invariable?) word; the Hebrew text here uses 'one' in the plural" (Assmann). This paradoxical positioning expressed by the one-in-the-plural encodes the violence of every project that reduces the open-ended nature of collective temporality to a single source of authority, power and meaning. When a community reduces its narratives of being and belonging in this manner, the logic of the sacrifice which underlies this desire to eradicate difference is exposed. Rene Girard reminds us that "there is a unity that underlies not only all mythologies and rituals but the whole of human culture, and this unity of unities depends on a single mechanism, continually functioning because perpetually misunderstood - the mechanism that assures the community's spontaneous and unanimous outburst of opposition to the surrogate victim." (*Violence and the Sacred*). It is not hard to imagine how this sacrificial logic informs the creation of communal identity: its pronounced opposition to the ethnic 'others' who serve as surrogate victims are crucial in the development of nationalist ideologies.

For me, a subject positioned in the constant identity translation between the United States and what used to be Yugoslavia, the psychic space promised by this Internet nation offered a valuable supplement to the mainstream representations of the war between the Western Empire of Human Rights and the Serb Vampire Republic of Milosević which the divine omniscience of our media projected until the October 2000 Belgrade Bulldozer Revolution. The tone of benevolent, post-Kafkaesque humour powers CY as a site where laughter can become a form of a valuable political cure. The parodic power of the site translates the magnitude of the trauma survived by its citizens into a promise of non-nationalism

and non-violence implied by the non-serious nature of the CY as a portable cultural project. According to Linda Hutcheon, parody has been transformed by the post-modern condition into "one of the major forms of modern self-reflexivity", where the intentional performative insignificance of the political helps the subject to overcome the burden of past traumas. (*A Theory of Parody*) The CY website is at once a ridiculing imitation of the nation and a promise of overcoming the conflicted legacies of state-induced violence that lead to so many of the Yugoslav tragedies. The lethally overbearing reach of the political into the everyday during the last decade of the past millennium makes the promise of a cyber form of civil society particularly alluring.

Founded on the ninth day of the ninth month of nineteen ninety-nine, CY requires all its citizens to choose a ministry they will head upon application. Some choose to be in charge of cookies, others aspire to the more inventive ministries, like Clark sociology professor Eric Gordy, who is the Secretary for *kajmak*. By choosing one of the least translatable, yet most familiar words (*kajmak* is a deliciously greasy variety of raw cream cheese for post-Yugoslavs) Gordy foregrounds a specific locality of post-Yugoslavia that does not wither away with the state. The taste of *kajmak* can only be imagined by those CY citizens who join the site in solidarity with those who were in close proximity of war and violence. Those Chinese, Indians or Americans who engage in on-line communication with post-Yugoslavs who have been located in the state-in-deconstruction (Federal Republic of Yugoslavia) since 1991 are moved by curiosity and sympathy that makes them the perfect citizens of CY.

One of the ways in which CY performs a parody of de-territorialisation is manifest in Article 16 of the Constitution. "When it was founded, CY had no territory. There were 152 founding citizens. When the number of citizens reaches five million, CY will request membership in the United Nations, and soon after CY will request a territory of 20 square meters, anywhere on the Globe, where it will place its server. This will be the official territory, where its DNS entry will be located: <http://www.juga.com>". The gesture towards re-territorialisation present in this image of server-territory is laughable since the server represents a perfect technological extension of the national imaginary as a meeting point of individuals that have a sense of mutual belonging. By projecting the proper name of the Yugoslav collectivity over such digital territory, the gesture evokes the longings of cyber idealists who wish

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for the extension of the technological utopia through a network of possible material relations. Since twenty square meters is a miniscule territorial requirement, this nation is both ridiculous and earnest, as the trappings of power are simultaneously laid bare and appropriated for an apparently innocuous cause. Although all prone to nationalistic outbursts, the cyber citizens of this imaginary state share the love of the non-serious as a potential channel of crossing for the simplest everyday practices: from the exchange of cooking recipes to the attempts at dating. The main 'political' preoccupation these days has been the debate about whether to file for U.N. recognition even before the initially imposed barrier of five million members is exceeded.

This particular version of post-Yugoslavism was imagined by Zoran Balić, who manages the site of this Internet nation, after switching from theatre to computers. Simultaneously cynical and serious about the question of the nation, he reserves the title of Secretary Webmaster for himself. "We are looking for active, committed citizens," he said in an interview, "People capable of founding a new kind of country, a new kind of nationality that had laid bare the trappings of the state and placed its future in the hands of humanity" (Iain S. Bruce, "Birth of a cyber nation", *Scotsman*, September 11, 1999). The proclamation of this non-nationalist nationalism may well be rooted in what Mark Poster sees as new form of messianic discourse incited by the more immediate media of communication, like the Internet. "To the extent that the mode of information restructures language and symbols generally into a configuration that is aptly termed 'virtual reality', the particular form of the messianic, of our hope for justice, must go through this technological circuit and must account for the difference between writing and e-mail, dissemination and the Internet, the parergon and the World Wide Web". (*Cyberspace Textuality*) In comparison to writing, the rate of digital exchange promises an accelerated form of virtuality that has the ability to create utopian effects and transform the very materiality of life by the potential to engage in movement and reach for an outside imagined in the digital domain.

Using the math-based reality of the digital to restructure the realm of human desire, this nationalist project exposes the phantoms of collective imagination for what they are: imaginary constructs utilized by the governments, states and armies to mobilize their citizens for war. This is especially true when governments engage in the tweaking of ethnic boundaries into the new national ones and set out to destroy the multi-ethnic communities, as in the case of the former Yugoslavia. The unveiling of a "particular form of the messianic" has been especially acute in the face of the variability of media representation of the Wars of Yugoslav Succession.

It is true, there were hideous crimes committed both by 'the serbs' and their ethnic rivals, but the historical narratives circulated by the so-called global (Western) media were almost exclusively preoccupied by 'the serbs' and their beastly need to cleanse ethnic others. The question of guilt and responsibility for all war crimes needs to be addressed by an ideal system of human rights and global justice, not by the partial tribunal in The Hague, which is the instrument of 'Western justice'. The narratives spun by the global media in the service of war were pointed at 'the serbs' and their last remaining state of FR Yugoslavia. This excessive representation of 'the serbs' may have backfired in the end. Paul Virilio concludes that the NATO intervention in Kosovo became such a fiasco due to the fact that "when you claim to prosecute a war in the name of 'human rights' - a humanitarian war - you deprive yourself of the possibility of negotiating a cessation of hostilities with your enemy. If the enemy is a torturer, the enemy of the human race, there is no alternative but the extremes of total war and unconditional surrender." (*Strategy of Deception*)

The spread of the gothic imaginary which invokes dismembered bodies, raped women and death camps had been circulated through the global media at the very mention of the word Yugoslavia to account for the distant and alien forms of violence that require strong intervention and peace-keeping. The tweaking of ethnic boundaries into the new national ones and the destruction of multi-ethnic communities has given rise to the rebirth of the

gothic imaginary that circulated around the very mention of the word Yugoslavia. The volatile media representation of 'the serbs' obliges an almost automatic violent intervention of the NATO to put an end to the barbaric acts of their state against its separatist Albanian population. This approach ultimately always excites more conflict and yields more violence between the ethnic communities, providing NATO with an excuse and alibi of military intervention and 'peace keeping'. The sacrificial logic utilized by each of particular form of ethnic chauvinism in the Balkans through the manufacture of 'surrogate victims' was ultimately topped by the NATO's sacrifice of the entire region through remote control bombing of 'the serbs' and the radioactive and chemical contamination of their environment in the coming decades.

The escape into the virtual by the CY citizens may be understood as a simultaneous movement away from this type of destructive politics that would ultimately lead to the complete de-legitimation of the earthly tyranny and a call for a new project of global identity based on what Yugoslavia used to be. Therefore, the posited variability of the CY concept is part of the struggle for control over the mediated representation and digital translation of the images of violence in the former Yugoslavia. CY represents a site that opens up a possibility of different than violent outcomes for those who have been labelled by the sign of the vampire within the global cultural economy. By appropriating Western discourses and technologies of virtuality and imagined community and turning them into a high-tech ruse, CY ends up as the ultimate computer game, a spoof of neo-nation building that could also act as a channel of inter-ethnic reconciliation and dealing with the issues of guilt and responsibility for those who have lost their loved ones.

The mixture of nostalgia for one own youth and the guilt of the survivor who watched the senseless destruction of Yugoslavia since 1991 haunts me as I contemplate entering the site. Laced with the utopian but almost secret hope for the better future of those who will inherit the conflicted and complex legacy of the subjects unwilling or unable to find their identities in the immediate ethnic subcategory after the neo-nationalist takeover during the late nineteen eighties, I resist spending my time on the World Wide Web. This particular imagined community of post-Yugoslavs finds one of its digital articulations in the chat rooms of Cyber Yugoslavia, where those who embrace variability are able to engage in discursive practices which reflect their everyday anguish with the narrow-minded and boring projects of nationalist exclusion.

The imaginary core of my true-real experience as a child growing up in Yugoslavia centres on a vision of Tito-ism, as a deviant form of repressive communism that had positioned its citizens as participants in an unprecedented experiment carried out in the history of mankind. This messianic dimension of revolutionary ideology was constantly compromised by the party policing of its revolutionary gains, and the personality cult of Tito himself. The pseudo-totalitarian iconography produced around him a benevolent, 'almost non-commie commie', paternal metaphor for the liberated masses of the Yugoslav workers and peasantry soon outgrew reality to such an extent that the citizens were forced to either bow to the new idol or subject to irony the excesses of coffee table books like *Tito and the Bees*.

Most of my generation coming of age in the urban cultures of Belgrade, Zagreb, Ljubljana, Sarajevo and Skopje during the 1970s and 80s had been immersed in further

ironies of simultaneous cultural openness to the Western youth movements and constant political surveillance of the revolutionary vanguard at home. The revolutionary promise is certainly intoxicating to the youth bent on making a difference, but the creation and the continuing existence of the 'new class' of communist officials with almost aristocratic privileges put a significant damper on the enthusiasm. Rock culture and the new media of communication captured the imagination of post-war Yugoslav urban middle class generations as the expression of protest and passion against any form of authoritarian establishment, including the rapidly laughable discourse of Yugoslav political technocrats in the decade before and after Tito's death. The idea of CY seems fully compatible with the everyday living practices of these urban populations after the real-life tragedies of the entire decade of the nineteen nineties in the region.

The activist motivation and attitude radiating from Tim Jordan's *Cyberpower* is also present in the promise of virtual imaginary as a refuge for those whose identifications fit into a particular collective project: "The virtual imaginary always appears to be almost true, because the technology needed to realize a virtual utopia or dystopia always appears to be almost ready". The imaginary promise of fullness, perfection or totality is there to support wishing for an encounter with those who share the familiar bond of belonging to an imaginary collective. To form an identity that will be always 'almost true' through a communication network requires an imaginary leap of language into its transmissible form. The digital revolution enables these 'almost ready' realities to coalesce around speech acts sent via computer into the techno-semantic field of others who imagine the same virtual location.

One of the major nation-building problems of all the former Yugoslavias was the conflict between the Slavic race as a unifier (pan-Slavic sentiment) and multiple religious cultures (Catholicism, Eastern Orthodoxy, Islam) as dividers of the south Slavic and other non-Slavic peoples that inhabit western Balkans. The latest Yugoslav wars represent the triumph of culture as a factor of difference and separation utilized by the unscrupulous post-communists like Milošević, Tujman and others, who were willing to plunge socialist Yugoslavia into a war of territorial division. The portable nature of CY both recuperates culture as a possible unifier of citizens across ethnic lines and enables the realm of the shared everyday practices to figure into this open form of Yugoslav-ism.

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Those identities that did not fit into the ethnically 'cleansed' versions of particular national projects, as well as those whose nationalism was supplemented by the longing for a space of common personal and cultural exchange were de-territorialised after the Yugoslav break-up in 1991. This virtual promise of CY fits perfectly into my own refusal of easy identifications, especially with any form of exclusionary practice and discourse. But, the browsing habits I practice seems so rudimentary that my imagined communities often revolve around trans-cultural encounters with scholars committed to the same habit of cultural crossings and encounters. The Internet's online communities provide a version of the virtual imaginary whose operations

have very real discursive effects on the identities of those who engage in a particular quest for a common position.

However, the cyberscape inhabited by disappointingly sparse digital messaging seems to abrogate anything that may be close to the realm of ideology, probably anxious about the return of communist-turned-ethnic war machines that have generated acts of genocidal rage. As is often the case with the Internet, the promise of orgiastic communication between cyber-citizens turns out to be much better than the actual browsing. This digital domain is by definition devoted to the practice of everyday life, which makes it open to criticism regarding questions of those very acts of violence that it would rather escape and forget. Problems of Balkan ethnicities are at least partly rooted in the recurring narratives of communal suffering and revenge which are often misused to mobilize the masses for acts of 'just and righteous' violence. 'The serbs', who have been transformed into the ethnic glue of Yugoslav communality by the modernizing projects of Slavic unification inspired by the revolutionary ideals of the West in the course of the twentieth century, are today finding their last territorial refuge in the rapidly crumbling FR Yugoslavia and the Serbian entity in Bosnia-Herzegovina.

Online communication extends the possibility of creating a new vision of ethnicity in the region, the one that will create openness despite the horror of the entire last decade of the old millennium. The outrages ought not be limited to the phantom of 'the serbs', but examine the legacy of ethnic authoritarianism by opening the channels for the work of mourning to take place. If the Balkans are to overcome its vampiric image and legacy in the global cultural marketplace, the digital domain could provide one of the valuable modes for storing testimonies of the victims and their loved ones, ensuring that the forgetting is not enforced as part of new state entities after the final dissolution is over. The kernel of trauma that informs the sacrificial logic of the One and Only needs to be defused through by the formation of some sort of truth and reconciliation process that will operate as a supplement to the work of international justice tribunals.

The role of culture in this process needs to be redefined away from discourses of exclusion as was the case in the debates of Yugoslav intellectuals since the middle of the nineteen eighties. If there is a legacy of common life during the times of socialist Yugoslavia, there is a need for imaginative recuperation of those everyday practices that distinguished this region during the Cold War period. The variability of the former Yugoslav notion of culture was rooted in practices of ethnic inclusion of difference.

Subject: <nettime> On search engines
From: Matthew Fuller <matt@axia.demon.co.uk>
Date: Sun, 14 Feb 1999 13:31:21 +0100

Excerpts from an interview with Mongrel by Matthew Fuller



Matthew Fuller: The *Natural Selection* project at <http://www.mongrelx.org> is an Internet search engine that works in exactly the same way as any other one of these vast pieces of software that find data on the web, but that adds its own twists. It is clear that search engines have acquired immense positional importance in the network, acting as a gateway (both in the sense of allowing and blocking access) to material on the web. As a technical and media context, it is one that is riven with the most inexplicable density of political and cultural machination. Can you tell us something about the project?

Harwood: Well, basically, it's the same as any other search engine. The user types in a series of characters that they wish to have searched for. The engine goes off and does this and then returns the results. If you're looking for sites on monocycles, that's what you get. If you're looking for sites on elephants, that's what you get. As soon as you start typing in words like 'nigger' or 'paki' or 'white' you start getting dropped into a network of content that we have produced in collaboration with a vast network of demented maniacs

strung out at the end of telephone wires all over the place. The idea is to pull the rug from underneath racist material on the net, and also to start eroding the perceived neutrality of information science type systems. If people can start to imagine that a good proportion of the Net is faked, then we might start getting somewhere.

And as a search engine from Europe it runs faster than most US based search engines. Enlightenment and a cheaper phone bill - you can't lose.

Mervin Jarman: *Natural Selection* offers an added value to critical work on the Internet which is unequivocal in that it allows practitioners to plug their work into arenas that would otherwise be inaccessible. This is particularly because of its constructural texture, and its ability to redefine and redirect search strings to specified locations, commonly termed aiding and abating - luring the unaware into a spate of awareness that they may not have voluntarily wanted to realise.

H: One of the hidden things about the project is that it's based on a harmless hack on one of the mainstream Internet's most popular sites. We corroborate our searches with other search engines. They don't necessarily like us doing this. So we are engaged in a running battle with the site managers of various engines who keep trying to lock us out, trying to stop us reverse engineering their workings and using it to our advantage. Presumably they think we're some kind of commercial competitors. If only...

MF: That's an example of a technical conflict going on in the work, which is obviously a very live one since it messes so heavily with control of proprietary culture masquerading as social resource.

Echoing this, like most of Mongrel's work, *Natural Selection* doesn't shrink away from difficulty. If people are going to check it out, they need to be looking for more than a punch line, or a nice neat 'anti-racist' or 'multicultural' solution. The nineties have seen a near complete homogenisation of language around race. A fait accompli that trivialises the deep texture of language, culture and racialisation. We seem to have entered an era of a miserabilised 'politics of semantics' represented by arguments over phrases such as Bill Clinton's "it depends on what the meaning of 'is' is", and London's Metropolitan Police Commissioner Paul Condon's nervous wordplay in trying to avoid the acknowledgement of the institutionalised racism of the police.

At the same time, *Natural Selection* very much delves into this politics of semantics as it is constructed through software conventions and the protocols built into the World Wide Web.

Stop Big Brothers!

SUPREET SETHI

The Internet is a great leveller. Everyone can use it to get and exchange information efficiently. Some of us are servers and producers of this information, but most of us merely use it. Obviously, one can find out information about those who serve the material, but interestingly enough, none of us are exempt from this watching eye. There are many ways to get information about a person on the Internet as somewhere, somehow, there will be record about where you have been. And anyone can pick this up.

Lets take an example. Point your browser to any search engine and search for <your name>, or my name. If you have been actively participating in any Internet based activities like a mailing list, your name would definitely pop-up in the search. This may seem like redundant information collected and archived by a search engine, but there are many companies that actively acquire and analyse such information for their benefit.

This practice - known as profiling - is used for co-relating online activities with activities in the physical world, and it is used for targeting advertisements accordingly. Companies make huge profits by selling this data to others. One such company is Doubleclick Inc., the largest ad site. About 11,500 sites carry the DoubleClicks banner ad.

Many and Different Ways

There are various other ways to get info about you if somebody wants to. I have to get only one e-mail to tell me what kind of operating system you are using, from which network or ISP you are coming from, and so on. All this is available in the header that is attached to every e-mail. For example:

```
[Received: from ludworth.uklinux.net (chris@ppp-1-19.cvx2.telinco.net [212.1.140.19])
X-Mailer: Mozilla 4.06 [en] (X11; I; Linux 2.2.16 i586)]
```

Consider the above text. It is appended to the mailer when the mail was transferred to reach me. What I can infer from this is:

1. When the person mailed me his/her IP address was 212.1.140.19 and he/she was using the dialup facility to connect to Internet.
2. Lives maybe in the UK, and using this IP address I can trace the person all the way to the ISP. If I put in some effort I can even get to know the city he/she lives in.
3. He/She uses Netscape on the Linux platform in a Pentium class machine

A similar text gets attached to any website request your browser makes. These are sample log files of my web server.

```
127.0.0.1 -- [01/J an/2001:04:34:16 +0000] "GET/images/book.gif HTTP/1.0" 200
964 "http://127.0.0.1/images/" "Lynx/2.8.3rel.1 libwww-FM/2.14"
```

This information in itself does not speak much but it all has more meaning when

cookies are sent to you and your browser accepts it. This is the kind of material that Doubleclick would be looking at.

So whether it is business transactions or a private affair, information can be gathered and used against you for others' personal benefit or for causing some harm to you.

The question that remains mostly unanswered is, "What can be done to 'anonymize' your identity?"

A few simple steps that can get you out of the public eye to a large extent:

1. You should use an anonymous proxy for surfing websites. Web sites are requested for by the browser. If a proxy is being used, the request is transferred to the proxy software and it handles the request and then sends back to you the pages and their content. Anonymous proxies do not reveal your identity when you make a request. Another interesting benefit of using proxy is that the local ISP cannot stop you from surfing certain sites because you are not directly requesting for any sites.

2. Using the anonymous remailer service which is provided by many sites. You mail them your mail, and they will redirect it to the concerned person or group.

3. PGP (Pretty Good Privacy) can be used to encrypt your mails, allowing only the concerned person access to the mail in clean text, even if the mail is snooped. For PGP, the person the email is being sent to releases his/her public key. When you want to send a mail to that person you use his/her public key to encrypt the mail. Then he/she would be able to decrypt and read the mail.

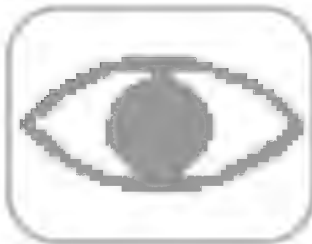
Sites worth visiting in this context are:

www.privacy.net

www.privacytimes.com

www.anonymize.net

Privacy is not about sending a few mails by remailer, surfing certain sites with third party proxy or using PGP for a particular message. It is about using such services on a regular basis. Remember, there is security in numbers.



A Chronicle of Media and the State in India

JEEBESH BAGCHI

"It is that accursed wire that strangles us". - An 1857 rebel reflecting on the Telegraph

Age of Formulation

1885 Indian Telegraph Act

- 'Telegraph' means any appliance, instrument, material or apparatus used or capable of use for transmission or reception of signs, signals, writing, images, and sounds or intelligence of any nature by wire, visual or other electro-magnetic emissions, Radio waves or Hertzian waves, galvanic, electric or magnetic means;
- Within India, the Central Government shall have the exclusive privilege of establishing, maintaining and working telegraphs.

1918 The Cinematograph Act

- 'Cinematograph' includes any apparatus for the representation of moving pictures or series of pictures;
- 'place' includes also a house, building, c [tent or any description of transport, whether by sea, land or air;] and
- 'prescribed' means prescribed by rules made under this Act.
- Cinematograph exhibitions to be licensed. Save as otherwise provided in this Act, no person shall give an exhibition by means of a cinematograph elsewhere than in a place licensed under this Act or otherwise than in compliance with any conditions and restrictions imposed by such license.

1923 Official Secrets Act

Aimed at maintaining the security of State against leakage of secret information, sabotage and the like.

1932 Indian Tariff (Wireless Broadcasting) Amendment Act

Custom duty on wireless receiving apparatus fixed at 50%.

1933 Indian Wireless Telegraphy Act. (with Possession Rules)

Indian Telegraph Act 1885 had given control only of the establishment, maintenance and working of wireless apparatus. There had been no restriction on the possession of wireless apparatus and it was impossible to obtain a conviction without proof that the apparatus had been used for reception or transmission. This Act gave powers to control the possession of wireless apparatus.

1939 January 16: First organised Anti-Piracy Drive throughout India.

1941 Department of Information and Broadcasting set up.

1948 Report of the Sub-Committee on Communication, National Planning Committee.

"One of the outstanding defects of modern democracies is the appalling ignorance, if not illiteracy, of the average citizen, on matters of moment affecting their own lives. Leaders, therefore, get an importance, which is not only out of all proportion to their real substance, they become hypnotised by their own slogans and clichés to become gradually the breeding ground of their own self-deception. Education, true enlightenment, comes to be at a discount, objective information or scientific data becomes simply so much brief for special pleaders. The less one knows the more one talks, the more one talks, the less is one understood, the more is one honoured and admired for the verbiage one spins out on any and every occasion, with a pretence to omniscience which is the trade mark of democratic leadership. The result is an easy elevation to the pinnacle of eminence and distinction; the only condition for maintaining it is the perpetual figuring in the headlines of the daily and periodical press".

Age of Consolidation

- 1951** The Indian Telegraph Act (1895) extended to the whole of India.
- 1952** The Cinematograph Act amended. Extends to all of India.
- 1957** Copyright Act
- 1966** Asok K Chanda Committee Report on Broadcasting & Information Media
 "...It is not possible in the Indian context for a creative medium like broadcasting to flourish under a regiment (sic) of departmental rules and regulations. It is only by an institutional change that AIR can be liberated from present rigid financial and administrative procedures of Government".
- 1970** The Lok Sabha informed by the Union Government that "the present is not an opportune time to consider the conversion of the All India Radio into an autonomous corporation".
- 1975** June 25: Proclamation of internal Emergency.
 Akashvani brought under censorship and the AIR Code discarded as obsolete.
- 1975** August 1: Satellite Instructional Television Experiment [SITE] was launched.
- 1977** Working Group on Autonomy for Akashvani and Doordarshan constituted by the Ministry of Information and Broadcasting. Chair: B.G.Verghese.
- 1978** Akash Bharati Bill
 "The Govt has decided not to set-up an autonomous body of AIR and Doordarshan as recommended by the Verghese Group because such an organisation is not considered necessary to enable those mass media to discharge their basic objective of serving the people who are not served by other media".
- 1978** Working Group on the Granting of Autonomy to Films Division of India.
 Government took the view that Films Division already enjoys adequate Functional Autonomy, particularly with respect to creative and production matters and great films; even dramatic and poetic films, can be and have been made within the framework of the existing Films Division. Accordingly, it was decided to wind up the Group.
- 1982** Working Group on Software for Doordarshan. Chair: P.C.Joshi.
 "...In an unequal society people live differently, think differently and feel differently. The process of communication or software production left to the freeplay of market forces does not act as a countervailing mechanism against the natural working of an unequal society. It reinforces the unequal society rather than correcting it".

"...The freedom of the communicator to produce must be harmonized with the right of the weaker sections constituting the vast majority in a developing country to be truly represented in software. The over-representation of the elite and the negligible representation or false representation of the weak in software is an issue which is as serious and fundamental as the issue of creative freedom..."

- 1982** April: INSAT 1-A, India's first domestic communication satellite, launched.
August 15: Colour transmission introduced.
20 low power transmitters (100W) imported and established in all corners of India. INSAT 1-A utilised to telecast National Programme from Delhi simultaneously on all Doordarshan transmitters.
November: live telecast of IXth Asian Games all over India.
- 1984** Copyright Act amended to include video and audio cassettes.
- 1986** Indecent Representation of Women (Prohibition) Act

Age of Uncertainty

- 1989** *Prasar Bharati* (Broadcasting Corporation of India) Bill introduced in the Lok Sabha. Bill was enacted in 1990 but not implemented.
- 1990** CNN available through cable.
- 1991** Star TV begins operation with a South Asia footprint.
- 1992** Doordarshan's Metro Channel begins.
Zee TV begins telecast on Asiasat.
- 1994** Doordarshan introduces 10 satellite channels offering regional language programmes.
December: 60,000 cable operators start functioning
Asiasat carries 6 channels to India - CNN, SunTV, JainTV, AsiaNet, El-TV & ATN
- 1995** ZeeTV launches SitiCable. Cable Operations expand rapidly.
Doordarshan International starts on the ZeeTV transponder.
- 1995** Supreme Court Judgement
by P. B. Sawant, S. Mohan and B. P. Jeevan Reddy
Ministry of Information and Broadcasting, Govt. of India vs. Cricket Association of Bengal.
"...It is also urged that there is no exclusive privilege or monopoly in relation to production, transmission or telecasting and such an exclusive monopoly, if claimed, is violative of Article 19(1)(a)..."
"...There is no doubt that since the airwaves/frequencies are a public property and are also limited, they have to be used in the best interest of the society and this can be done either by a central authority by establishing its own broadcasting network or regulating the grant of licences to other agencies including the private agencies..."
"...If the right to freedom of speech and expression includes the right to disseminate information to as wide a section of the population as is possible, the access which enables the right to be so exercised is also an integral part of the said right. The wider range of circulation of information or its greater impact cannot restrict the content of the right nor can it justify its denial. The virtues of the electronic media cannot become its enemies. It may warrant a greater regulation over licensing and control and vigilance on the content of the programme telecast. However, this control can only be exercised within the framework of Article 19(2) and

the dictates of public interests. To plead for other grounds is to plead for unconstitutional measures. It is further difficult to appreciate such contention on the part of the Government in this country when they have a complete control over the frequencies and the content of the programme to be telecast. They control the sole agency of telecasting. They are also armed with the provisions of Article 19(2) and the powers of pre-censorship under the Cinematograph Act and Rules. The only limitations on the said right is, therefore, the limitation of resources and, the need to use them for the benefit of all. When, however, there are surplus or unlimited resources and the public interests so demand or in any case do not prevent telecasting, the validity of the argument based on limitation of resources disappears".

1995 Cable Television Networks (Regulation) Act

"No person shall operate a cable television network unless he is registered as a cable operator under this Act".

1996 National Media Policy. Interprets the judgement in a Working Paper.

"There should be a regulatory body to oversee both public and private tele/broadcasting..."

"Adequate care should be taken to enable the setting up of non-commercial broadcasting stations to be run by universities, educational institutions, *panchayats*/local bodies, State Governments, etc."

"A new production style, which is people-oriented should be developed. In tune with the policy framework suggested here, the Indian private sector/State Government/NGOs/Local Government should be allowed to enter the field of broadcasting/telecasting".

"The apex regulatory body should be an independent autonomous public authority representative of all sections and interests in the society and should control and regulate the use of air waves in the interests of the public and to prevent invasion of their rights encouraged".

1996 Constitution of High Power Committee for the Implementation of the *Prasar Bharati* Act; Chair: Dr Nitish Sengupta.

"We recommend the setting up of an independent Radio and Television Authority of India, as strongly enjoined by the Supreme Court, to licence private channels, domestic and foreign, to impose appropriate terms and conditions on these licenses in accordance with the Broadcasting and Advertising Codes and also to receive and adjudicate on complaints of violations of these Codes, received from the public or representative bodies or consumers' forums. These 'complaints' functions of the Authority will also cover the channels run by *Prasar Bharati*. This Authority will also serve as the regulatory mechanism for private radio and television stations/channels".

"We recommend that local terrestrial TV and Radio stations should be permitted. These stations will also help municipal bodies and Panchayati Raj institutions in providing local broadcasting services to the community. For this purpose, the Indian Telegraph Act, 1885 could be suitably amended".

1997 *Prasar Bharti* Corporation constituted.

Tussle over interpretation of autonomy begins and continues till date.

1998 Information Technology Action Plan. National Task Force on Information Technology & Software Development, constituted under the authority of the Office of the Prime Minister.

1998 VSNL blocks site the following sites: www.cultdeadcow.com; www.sensenet.net; www.vocaltec.com; www.NetSpeak.com; www.Net2phone.com.

1999 VSNL blocks www.dawn.com.

2000 The Information Technology Act

(1)(a) "access" with its grammatical variations and cognate expressions means gaining entry into, instructing or communicating with the logical, arithmetical, or memory function resources of a computer, computer system or computer network.

(66) Hacking with Computer System:

(1) Whoever with the intent to cause or knowing that he is likely to cause wrongful loss or damage to the public or any person, destroys or deletes or alters any information residing in a computer resource or diminishes its value or utility or affects it injuriously by any means, commits hack:

(2) Whoever commits hacking shall be punished with imprisonment up to three years, or with fine which may extend up to two lakh rupees, or with both.

(43) Penalty for damage to computer, computer system, etc.

If any person without permission of the owner or any other person who is in charge of a computer, computer system or computer network:

(a) accesses or secures access to such computer, computer system or computer network;

(b) downloads, copies or extracts any data, computer data base or information from such computer, computer system or computer network including information or data held or stored in any removable storage medium;

(c) introduces or causes to be introduced any computer contaminant or computer virus into any computer, computer system or computer network;

(d) damages or causes to be damaged any computer, computer system or computer network, data, computer data base or any other programmes residing in such computer, computer system or computer network;

(e) disrupts or causes disruption of any computer, computer system or computer network;

(f) denies or causes the denial of access to any person authorised to access any computer, computer system or computer network by any means;

(g) provides any assistance to any person to facilitate access to a computer, computer system or computer network in contravention of the provisions of this Act, rules or regulations made thereunder;

(h) charges the services availed of by a person to the account of another person by tampering with or manipulating any computer, computer system, or computer network, he shall be liable to pay damages.

Explanation - For the purposes of this section:

(i) "computer containment" means any set of computer instructions that are designed :

(a) to modify, destroy, record, transmit date or programme residing within a computer, computer system or computer network; or (b) by any means to usurp the normal operation of the computer, computer system, or computer network.

2000 Guidelines and General Information for setting up Submarine Cable landings for International Gateways for Internet. Issued by the Ministry of Communications, Government of India.

2. The landing Station for International Gateway for Internet shall be used only for carrying Internet traffic.

7. The Telecom Authority or personnel authorized by the Telecom Authority reserves the right to carry out surprise inspection at the Landing Station to ensure that only Internet traffic is carried through the Landing Station and the Landing Station is not used for unlawful activities or against public interest.

13. Landing Station shall not be set up in security sensitive areas. The Internet nodes covering places of security importance shall be routed through VSNL only. The security sensitive areas would be identified from time to time. As on date the security sensitive areas are Punjab, J & K, North Eastern States, border areas of Rajasthan, Andaman & Nicobar Islands and coastal areas of Gujarat and Tamil Nadu (excluding Chennai).

14. The ISP licensee shall make available all the billing details of any subscriber on demand by Telecom Authority.

15. The ISP licensee shall block Internet sites and individual subscribers, as identified by Telecom Authority.

27. Agencies authorized by the Government should be able to monitor all types of traffic passed through the landing terminals, including data, FAX, speech, video and multi-media etc., both in interactive and non-interactive modes.

28. The monitoring should be possible on the basis of key words/key expressions/ addresses (IP address or e-mail address) of initiating or terminating subscribers.

29. It should be possible to scan through entire traffic passing through the gateway and filter the traffic as per the key words/ key expressions and addresses defined by the security agencies. Filtered traffic should be stored in the memory/directory provided for the security agencies, which have defined the monitoring requirement. Before storing the monitored information, it should be segregated and stored in the directory in different files. The filtered information must be decoded and stored in such a way that direct hard copy of FAX and data or audio/video tapes of the speech/video recording could be produced. Log of recorded information for each agency must be created in the directory of the agency concerned displaying the details like date and time of recording, number of record etc.

30. Each of the security agencies should be provided with a specified dedicated space/memory/directory/storage in the Monitoring Centre computer.

34. Office space of 20 feet x 20 feet with adequate, uninterrupted power supply and air-conditioning which will be physically secured and accessible only to the personnel authorised by Telecom Authority, shall be provided by the licensee at each location, free of cost.



Policing the Net

The Dangers of India's New IT Act

SIDDHARTH VARADARAJAN

Passed in the Lok Sabha on 16 May 2000 with unseemly haste, the Information Technology Act attempts to achieve two contradictory objectives. The law is premised on the assumption that the new information technologies are a liberating tool for the economy and for governance; but some of its provisions are imbued with a police mentality that seeks to control and restrain the manner in which citizens use computers. While India is one of the few countries to put in place legislation to facilitate e-commerce and protect computer networks from cyber crime, the careless manner in which some of the prescribed offences have been defined - and the sweeping powers granted to the police - make it almost certain that the law will be misused.

Defining Obscenity

As it is, the Indian Penal Code's definition of the crime of obscenity (Section 292) is archaic and in urgent need of revision. Though the Supreme Court has narrowed the focus of obscenity through liberal interpretation of existing statutes, law enforcement officials and lower courts frequently entertain the flimsiest of 'obscenity' petitions. When the same IPC definition of obscenity is made applicable to the 'publishing' or 'transmitting' of material in electronic form, chances are that a wide range of Internet related material could come within the ambit of the law.

The IT Act defines as obscene "any material which is lascivious or appeals to the prurient interest or if its effect is such as to tend to deprave and corrupt persons...who are likely to read, see or hear the matter contained or embodied in it". The penalty for a first offence is 5 years imprisonment; subsequent convictions will result in 10 years imprisonment. Leaving aside for the moment the subjective and arbitrary nature of the definition, neither the bureaucrats and 'experts' who drafted the IT law, nor the parliamentary standing committee which vetted its provisions, have applied their mind to the problem of defining what exactly 'publishing' and 'transmitting' entail in the context of the Internet.

Let us imagine that an 'obscene' website existing out in cyberspace is accessed by a customer of a cyber cafe. He may have explicitly sought the site or clicked on it in error out of a long list of sites thrown up by a search engine. If you don't believe that can happen, try searching for 'White House' on any engine and see what you get.

Once the 'lascivious' site appears, could the cyber cafe owner be hauled up for allowing it to come up on one of his computers? Could the customer be accused of attempting

to 'deprave and corrupt' a police officer who happens to glance at the screen? And what happens if the URL of the site is stored in the browsing software's history or in the computer's cache? Would that amount to publishing and transmitting? Finally, what about sites that provide a search engine or chat rooms? Could they too be targeted?

What makes the IPC Act especially dangerous is that the nebulousness of the prescribed offence is matched by the sweeping nature of the powers granted to the police. Police officers, and even ordinary government officials, are allowed to search public places like cyber cafes and arrest persons suspected of committing a crime under the new law. Clause 79 of the IT Act reads: "Notwithstanding anything contained in the Code of Criminal Procedure (CrPC), any police officer, not below the rank of a Deputy Superintendent of Police, or any other officer of the Central government or a State Government authorised by the Central Government in this behalf may enter any public place and search and arrest without warrant any person found therein who is reasonably suspected of having committed or of committing or of being about to commit any offence under this Act".

Police Abuse

Curiously, IT minister Pramod Mahajan told Parliament that this clause was actually a 'safeguard' since the CrPC grants similar search and arrest powers to any policeman and not just to a senior officer. But this explanation is faulty on three accounts.

> First, it ignores the fact that the relevant provisions of the CrPC - Sections 151 and 157 in particular - are routinely abused by the police. Section 151, in fact, says any person so arrested can only be held in prison for 24 hours. Though this is rarely followed, persons arrested without a warrant under the IT Act have not even been given the benefit of such a safeguard.

> Second, the CrPC does not grant the police such powers for non-cognisable offences. Certain offences under the IPC such as Sections 172, 173, 175 (omission to produce document to public servant by persons legally bound to produce it) and 204 (destruction of document to prevent its production as evidence) are non-cognisable and hence the police cannot simply arrest a person without a warrant. Under the IT Act, the electronic versions of these crimes have, by default, become cognisable since the police have been granted the power to act on their own without a magistrate's authorisation.

> The IT Act empowers not just police officers but any class of government official as decided by the government.

The IT Act seems to be especially targeted at 'public places' (i.e. cyber cafes), where more than 75 per cent of Indian net users access the web.

New Law, Old Notion

According to new media theorist Ravi Sundaram, the IT Act is built on the premise of 19th century definitions of territoriality. "Crime needs a physical location and this territory must be policed. The new law is shot through with this notion".

During the Standing Committee's review of the draft, in fact, MPs were quickly convinced by the arguments of Delhi's police commissioner of the need to watch cyber cafes. They inserted an amendment making it mandatory, on pain of imprisonment, for cyber cafe

owners to maintain a record of the identity of their customers and a list of web sites visited by them. Fortunately, better sense prevailed and at the last moment the Vajpayee government agreed to drop this amendment.

However, the clauses on obscenity and police powers were not dropped or modified. When these begin to be invoked by petty officials or those with a political or 'culturalist' agenda, one can only hope that the courts will step in to protect the citizen's right to information and unfettered communication. In the mean time, the government should give serious thought to amending the Act to eliminate the scope for abuse.

To,
The Editor
The Hindu

Re: Covert Censorship

Sir,

I am a subscriber to VSNL's Internet service with the following email address skaziknde.vsnl.net.in. Since September end, 2000, I noticed that all emails to and from me to Middle East Socialist Network (MESN) could neither go through nor reach me. MESN is an e-group with 123 members across the world who receive messages regarding news and political developments in that region. Its members are largely researchers or people interested in political events and struggles in that region. Anyone can access the MESN website and messages at www.egroups.com/group/mesn.

After futile attempts to set things right myself, I came to know from the MESN moderator that my account had, for some unknown reason, been 'blocked' by my server. On October 31, upon visiting the VSNL office at Bangla Sahib Road, it was confirmed by VSNL that my account had indeed been blocked. Upon inquiring as to why this had been done without my knowledge or consent, one of VSNL's managers - Mr. Goel from the Customer Services Section - informed me that since "Muslims have links with Pakistan and because of reasons of security", they had taken this step. Upon protesting this covert, undeclared censorship, Mr. Goel, with a grandiose gesture, declared "We can do anything". He alleged that "some people" had complained against me - an allegation which he has failed to prove or substantiate. MESN only emails its subscribers, and also has an anti-spamming policy, so the question of anyone receiving any unsolicited mail from MESN does not arise.

My mail was 'unblocked' after filing a written complaint and meeting a couple of other managers! Needless to say VSNL is still to account for its outrageous unwarranted policing and censorship of my mail. I would like to ask Mr. Goel and VSNL: is this how you treat your Muslim customers? Are we, once again, to be collectively branded and placed in the 'suspect' category due to the prejudice and communal bias of VSNL officers?

Seema Kazi, New Delhi

Hindi Web World

Tentative Steps in an Optimistic Direction

RAVIKANT



The presence of Hindi on the World Wide Web is still limited and tentative. Since the language has had to negotiate a new technology, which is otherwise available to English, the initial attempts in the '90s have been to develop basic computing tools such as fonts, keymaps standardization, word processing, electronic dictionaries, spellcheckers, etc. The task is by no means accomplished, and browsing the net is still a huge struggle as every fresh Hindi site demands font download and configuration. The late '90s boom in the IT sector has by and large bypassed Hindi, and the language of technology continues to be English.

Insofar as this technology is in search of a wider bazaar and a greater catchment zone for professionals, Indians have taken to computers in a big way to grab the new job opportunities here as well as abroad. 'Computer Education' is one of the hottest selling propositions, and to cater to students in the ever-proliferating computer centres computer magazines have become a ubiquitous sight in pavements stalls and malls alike. A couple of these magazines publish Hindi editions (*Chip Hindi*, *Computer Sanchar*, etc.) as well, but the overwhelming vocabulary of computer words even in these magazines is in English. This implies that readers would have to have a degree of access to English if they wish to comprehend the fundamentals of computing. The language of programming being English, the texts, which are basically teaching aids to supplement the materials taught in computer classes, read like alien technological jargon packaged in Hindi.

Given these circumstances, it was natural that the early web pages in Hindi were devoted to providing technical support and services. Institutions such as CDAC, Pune (www.cdac.org.in) NCST (www.ncst.ernet.in), Mumbai, www.bharatbhasha.org, Indian Institute of Information Technology, Hyderabad (www.iiit.net) and a host of smaller outfits

continue to explore the possibility of producing machine translation, on-line dictionaries, WordNet, etc. IIT has developed a system of human-aided machine access capable of translating basic meaning across various Indian languages. They call it the *Anusaaraka* system i.e. a system that follows the original rather closely. The group has also built an online English-Hindi dictionary deploying a usage-database collected from lay users such as housewives and schoolchildren. The quality is admittedly uneven. They use the ISCII font standard, and this is freeware available on their site. At a recent workshop in Hyderabad an effort was made to establish a common pool of resources to develop lexical resources in Indian languages. It became clear that the free software developers' community has raised fundamental questions about issues of language on the Web on their discussion lists (on e-groups, for example) and personal sites, but their work has not received the publicity it should have.

The Hindi Programmes in universities in the US, Japan and elsewhere have put up websites focused on Hindi's literary heritage: selected works of well known poets and writers with a short introduction. Professor Malay of Colorado State University, for example, has a website (www.cs.colostate.edu) on which you can access a whole range of materials – from the *Siddha* poets of the 8th Century and medieval saint poets like Kabir, Tulsidas (including the *Hanuman Chaleesa*) and Meera, all the way to Ghalib, Nirala, Hazariprasad Dwivedi and Javed Akhtar. Its masthead describes Hindi as the “language of peasants, songs and scholars”, and there is a chronological account of milestones in Hindi, as well as a demographic listing of areas where Hindi is spoken. It is also by far the best resource page for Hindi/Urdu/Sanskrit in terms of facilitating links to a thoughtful selection of URLs (as well as sound advice, in parenthesis). Another NRI literary labour of love is www.udgam.com. *Kaavyalaya* – the house of Hindi poetry at www.manaskriti.com is a slowly expanding gif archive where classical poets brush shoulders with some unknown names. A similar venture is the site www.bharatdarshan.co.nz which even has an attractive looking Hindi teacher... The best literary fare from NRI enthusiasts comes from the creators of www.abhivyakti-hindi.org, “a non-commercial monthly magazine of a personal taste”. This unpretentious webzine has twenty-one sections dealing with art, culture and domesticity. My own favourite from the current issue is the extract from the Introduction of *Ujaale Apni Yadon Ke*, a collection of ghazals by Bashir Badra. The stories included are those by Amrita Pritam and Satyajit Ray in a section dedicated to translations from Indian languages. The Hindi language is represented by a story by Mohan Rakesh - *Ardra*. *Abhivyakti* also hosts a couple of regularly updated, uncomplicated dictionaries - English-Hindi/Urdu and Hindi-English, besides sections on humour and art. Its sister site, www.anubhuti-hindi.org, is a weekly, and is equally well done and comprehensive, inhabiting a range of genres and poets from Jaishankar Prasad, Ibne Insha, Dushyant Kumar and Girijakumar Mathur to emergent voices that are not so well known. Both sites carry a helpful catalogue of difficult words with meanings and provide information/links on pedagogic and literary resources.

The famous poet-lyricist Gulzar has an exclusive www.gulzar.net dedicated to him. A creation of his fans, the site is as lyrically arranged as his poems. The sections on his life, works, future plans, other links, etc. are all put under first line headers from his songs. The page follows a bipartite division between Hindi and Roman scripts. The site also provides

links to www.urdustan.com and www.urdupoetry.com which together constitute a big archive of works by most well known as well as a few anonymous poets in Urdu. The strategy of transliterating Hindi/Urdu works into Roman script dates back to the early days of the net, and the two technologies deployed to this end are known as ITRANS and JTRANS.

In the last six months or so, Hindi has registered a more substantial presence in the virtual world. Users can now write emails and read newspapers, as many newspapers - *Amar Ujala*, *Dainik Jagaran*, *Hindustan*, *Milap*, etc. - are now available online. In what is essentially a developing domain, 'First' is the buzzword and the USP, and the web is full of proud announcements such as: "First Hindi Web Magazine", "First Web Portal", "First Literary Magazine", "First Urdu/Hindi newspaper on the Net", and also the "First Mahaportal in Indian Languages". Sites like www.lashkar.com (a trilingual) and www.webdunia.com were pioneers in journalism. The former runs *Awadh Akhbar* in Urdu and Hindi, while the latter runs *Nai Dunia*, and the eponymous multi-channel portal exclusively in Hindi.

Apart from the usual fare on news, views, culture, religion, weather, shares, astrology etc., you also get an introductory series called the *Shaharnama*, a handy tourist guide to some Indian cities. Webdunia also provides email facility in Hindi. However, the main attraction of Webdunia is the online *Hans*, which is a widely respected literary magazine in print. Rediff.com, primarily an English site, has put up editions in many Indian languages but the Hindi edition is an eyewash as quite often the click on the columns leads you to the original English locations. Their email is neat though. The best mail provider, so far, is www.mailjo.com. And all of these are free, an ironic contrast to the government supported *Heap*, which comes for a price. Another disappointing site is www.hindi.indiainfo.com, which does not open easily and finally when it does, serves such indigestible cultural stuff as a celebration of the *ghunghat* (veil) as a symbol of Indian Womanhood.

The condition of government-sponsored sites is much worse. The National Book Trust is a premier publishing agency but its website www.nbtindia.com has nothing in the National Language except a couple of gif lines on the masthead. Similarly www.sahitya-akademi.org where I happened to be only the 1014th visitor starts promisingly with an image of Rabindranath Tagore's poem in his own hand, but ends disappointingly - it only provides a checklist of its publications - and that too in English. The Akademi produces many journals

in Indian Languages in print, but none of these have been allowed to make a transition to the Net.

*'First' is the buzzword
and the USP, and the
web is full of proud
announcements such
as: "First Hindi Web
Magazine", "First Web
Portal", etc.*

A recent addition, and a refreshing one, is www.net-jaal.com - "The First Indian Multilingual Mahaportal". It houses a web newspaper called *Netdainik* and a magazine called *Dinman* - named after the illustrious and highly successful newsmagazine of the 70s edited by Raghuvir Sahay. Netjaal's open approach becomes obvious the moment you open their sub-site www.dharmkarm.com, which not only gives space to major Indian religions other than Hinduism but transcends even the Gandhian "*Sarva-dharma-sambhava*" ethic by providing space to *nastiks* (non-believers). Its editorial in the current issue is an exposé of the *Dharma*

Sansad organised by the VHP at the Kumbha Mela site in Allahabad. It questions the legitimacy of the democratic claims the use of the term *Sansad* (Parliament) evokes.

Interestingly, *Dinman* has also been carrying a series of discussions and interviews with prominent Hindi writers on the predicaments and possibilities of Hindi in cyberspace. The response from the writers is interesting: while most of them welcome the widening of the horizon and of readership for Hindi, some of them sound critical and/or sceptical. Their argument is that the net is a skewed medium for a language spoken predominantly by the poor. Kamleshwar points out that we have not yet been able to embrace the computer as a necessary tool in our lives. It is something we use off and on. Vishnu Khare appears more hospitable to the idea of Hindi taking the cyber plunge and proposes that copyright laws and related legalities should be carefully worked out. More importantly, he sees in the net an opportunity to break the snobbish factionalism of the print sphere, as also the split between High and Popular literature. Sudhish Pachauri in his column - *Apni Bhasha, Apni Dunia/ "De Ragad ke"* - criticizes Hindi academia for producing generations of 'connoisseurs of literature'. The need of the globalising hour, according to him, is to produce professionals. Otherwise younger aspirants for jobs will simply quit studying the Humanities, a growing trend he illustrates by citing the recent exodus in Delhi University. He also bemoans the fact that (unlike Tamil) there is no initiative in Hindi to set aside a corpus fund to build lexical resources. Finally, he makes a fervent appeal to make Hindi techno-friendly and relevant without insisting on its purity.

This exhortation points to the desperate struggle that Indian languages, including Hindi, are waging to take on the challenges thrown up in the era of the Web. The quality of most of the sites discussed above is uneven. The lack of standard encoding techniques is a metaphor for the diversity of resources being produced and deployed by myriad independent initiatives. The Indian language world is crying for the intervention of an agency that could coordinate these disparate efforts. A Bill Gates will do it perhaps some day. But he will do it for a price.

Having said that, it also needs reiteration that the diverse intellectual and technological enterprise at work is also the strength of Indian languages on the web. Insofar as they have managed to shake off the burden of being officious, boring and artificial standard languages, they have already registered a quiet but significant victory. From this healthy platform of the everyday code of communications might emerge a larger agenda, a participatory environment and a genuine philosophy of difference.

Why Activists Cannot Afford to Neglect the Internet

ARUN MEHTA

Cyber-activism is an area that has only recently started to get attention. Activists, who see far more basic problems like hunger, malnutrition, illiteracy and exploitation all around them, have not always appreciated its strategic importance. What is increasingly being realized, though, is that the Internet can not only play a significant role in tackling these pressing problems, it has the potential of fundamentally changing the balance of power in society.

The Internet is a remarkable example of people power: a network of millions of people around the world works without any international body or government controlling it. No provision was made for a 'headquarters' in its design, since its early design parameters included the ability to survive catastrophes such as a nuclear attack. No matter how many of its nodes are destroyed, the remaining network should be able to continue functioning. A real-life test of this concept came during the Gulf War in 1991, when the US military faced huge difficulty in knocking out the Iraqi command network, which was built using commercially available Internet technology. However, this robustness isn't merely in the hardware. Over the years the Internet has developed an ethos that resists control. John Gilmore put it best when he said, "The Internet treats censorship as a malfunction and routes around it."

The reasons for this remarkable ability are many. The routing of packets from source to destination is a technologically sophisticated, yet conceptually simple task. It therefore easily lends itself to automation, making it a relatively efficient and progressively cheaper activity, since according to Moore's Law the performance to cost ratio of hardware doubles every 18 months. Censorship, on the other hand, is complex and often requires manual intervention. With increasing volumes of data flowing through the Internet, this becomes ever more difficult. Then again, there are many on the Internet who actively oppose any efforts at censorship. A web site that is banned in a particular country easily finds mirror sites to host it elsewhere.

But let us use the word censorship here broadly, and define it to mean anything that prevents people from providing and accessing information. Poverty, lack of telecommunications facilities or English language skills can far more effectively prevent people from accessing the Internet than any government censor board. However, computers are becoming increasingly cheaper. In the market already are set-top boxes that attach to a TV and a phone line, and cost only in the range of Rs.5000. Cheaper and more powerful devices are on the way. It is also becoming possible to access the Internet to a limited extent through mobile and even public phones. With the increased availability of vernacular language content on the Net, ignorance of English is becoming less of a liability while an improving ability to handle voice directly is making large segments of the Internet accessible even to the non-literate.

In short, the Internet is a network that is increasingly able to reach even poor people,

and crucially, allows them to easily become content producers, instead of merely passive consumers. It also, naturally, defies government and multinational control – certainly reason enough for activists to examine it closer.

Opportunities in Convergence

Even before the arrival of the Internet networking was always the cornerstone of human civilization. In order to establish its usefulness the Internet needed to find better ways to do things that were already being done - it thus converged with traditional industries. Examples of such convergence include e-mail and electronic publishing, where traditional methods have somewhat been pushed into a niche. These uses of the Internet have proved very useful for NGOs: e-mail has helped cut cost for communication and training, and kept membership informed and better able to participate in decision-making. Web publishing similarly reduced the cost of dissemination, and made fund-raising easier.

The Internet hasn't stopped at essentially text-based activities such as mail and publishing. Currently, as it gains the ability to handle audio and video, it is beginning to converge with large telecom, media and music industries. This offers new opportunities to NGOs. To appreciate this, we need to examine the role of audio and visual elements in communication, and how the Internet can handle them better than conventional industries.

Audio vs. Visual

Language is at the heart of communication. While communication involves both the ear and the eye in the early years of our lives (and for the non-literate, all their lives), language consists only of sound. When we examine telecommunications technologies, the main one being TV which combines pictures with sound, most others use sound exclusively, such as the telephone and various forms of radio, including AM, FM and Citizens Band. In other words, except for the print media which were invented at a time when communicating via sound over long distances was technologically impossible, all communications technologies have sound as a central element - many exclusively use sound. Even in television, often termed a visual medium, simply turning the volume down can easily help one appreciate the crucial role of sound.

The reason for the pivotal nature of sound in communications is not hard to find. As Victor Zue put it "Speech is natural - we know how to speak before we know how to read and write. Speech is also efficient - most people can speak about five times faster than they can type and probably 10 times faster than they can write. And speech is flexible - we do not have to touch or see anything to carry on a conversation" (*Talking With Your Computer*). Not just people who cannot read or write at all, even those who are literate, typically spend most of their day communicating orally.

Audio communication is far more democratic than written. Writing skills are very unevenly distributed, and few write well. As opposed to this, the human race is filled with people who are powerful oral communicators, from politicians and singers to hawkers on the street. An understanding of sight and sound has long been a matter of philosophical study. "To the ancient Chinese, the eyes constituted a yang type of sense organ: male, aggressive, dominating, rational, surface-oriented, analysing things. The ears, on the other

hand, are a yin sense: female, receptive, careful, intuitive and spiritual, depth-oriented, perceiving the whole as one" (*Nada Brahma: The World is Sound*, Joachim-Ernst Berendt). This comparison drives home the point well - that these two senses are not competitors but complementary to each other. This, as discussed below, the Internet does far better than conventional communications industries.

Conventional Communications Industries

A large number of industries have been built around communications. These include radio, TV, telecom, and the music industry. All are deficient in their handling of this crucial human faculty. Many, such as the telephone, produce sound of a quality far poorer than what has been technologically possible for several decades. Radio technologies, with the dubious exception of short wave, do not allow global reach. Those that do allow sound to travel large distances, such as the telephone and CDs, are grossly overpriced. Most don't have storage built in, requiring the telephone, radio or TV user to be 'online', consuming at the same instant at which the content is transmitted. Radio and TV have the added disadvantage of content censorship, as well as restricted access - only a limited number of such stations can operate in a given area, and only a few privileged people have the opportunity of determining the nature of the content they carry.

When it comes to handling numbers of people, telecommunications technologies operate at ends of the spectrum. The telephone is essentially a one-to-one device, while radio and TV are mostly deployed in the one-to-millions mode. CB for a while tried to occupy part of the yawning space in the middle, but it doesn't scale well - its coverage is a small geographic area, and if too many people take to it, CB communication easily degenerates into cacophony. Cable TV has been used to a limited extent to communicate within a community, but TV is a difficult and expensive medium to produce software for. Cable networks can carry dozens of audio channels in addition to the TV at little extra cost, and audio content is easy to produce. This could be exploited as a means for the local community to discuss and solve problems, as well as to educate - community radio, in other words. However, this has received little attention.

Newton Minow, then chairman of the FCC, in 1961 described "the vast wasteland" of TV as "game shows, violence ... sadism, murder, western bad men, western good men, private eyes, gangsters, more violence, and cartoons". Even, when it does convey information, as in a news program, TV is shackled by the two-minute rule. In the words of George Gilder, "The rationale for the two-minute rule is that the viewer will not tolerate more than two minutes of an unwanted story. Its only function is to forestall the zapper, but its effect is to frustrate any viewer with more than a superficial interest in a story. Increasingly it reduces TV news to a kaleidoscope of shocks and sensations, portents and propaganda, gossip and titillation" (*Digital Darkhorse*).

Despite these shortcomings, the electronic media are highly influential. A spectacular example is the effect of the televised Rodney King beating. "Domination of the information channels by television dramatically assisted the civil rights movement in the 1960s, altered the presidential political process in the '70s, popularised hospices, malpractice suits, feminism and the plight of the homeless in the '80s. Significant social change is already attri-

butable to the pervasiveness of the electronic media. And we are just at the beginning of such social change" (Leonard Sussman, *Power, the Press and the Technology of Freedom: The coming age of ISDN*)

The Internet in Audio-Visual Communication

Services such as Napster highlight the growing importance of the Internet in the audio sector. They have already resulted in an explosion in the amount of music available to consumers, disregarding legal restrictions such as copyright laws and the stiff opposition of the music industry. Likewise, Internet telephony is threatening the fat profit margins of the telecommunication companies¹.

The reasons for the Internet becoming significant in the audio sector are not hard to find. When compared with conventional audio industries, the Internet offers a low-cost option for reaching people around the world without censorship. Storage is a given, so the content can be transmitted on demand. Further, the Internet also allows the consumer to obtain more or less information on a subject.

Already, the Internet has provided a strong boost to radio: local stations became global without much financial investment, and thousands of stations with an amazing diversity of content are now available in this manner. Even poor people can now start their own radio stations, and have their voice heard around the world, if they have Internet access. This is a significant avenue for NGOs to explore, particularly since their content may not always be attractive to enough people for the conventional radio and TV networks to be interested.

This rapid growth of Internet-based audio has taken place even though the Internet is 'smart' only when it comes to text, and treats pictures and sounds as just so much baggage. The advent of affordable text-to-speech and voice recognition systems is allowing computers to handle speech intelligently², so that users can move effortlessly between the media of text and sound, with rapid progress expected in this field of intense research. "I believe the next generation of speech-based interfaces will enable people to communicate with computers in much the same way that they communicate with other people", says Victor Zue. Sound shall cease to be just baggage, and become instead our preferred means to control the computer. Billions of web pages³ that contain text-based information will become accessible via audio devices.

The implications of this development are momentous. Speech is a far more ergonomic medium of communication than text which makes it easier for people to produce content for the Internet that others can easily find. Not only would this dramatically increase the amount of content on the Internet, it would also make it available to all those who only have access to a phone. Audio input-output devices - the microphone and the loudspeaker - are mass produced and very cheap, so with the falling price of microprocessors a computer designed for speech input and output should be very cost-effective to produce, within reach of even poor people. Since the number of the poor is very large, a computer that they can afford would have very large demand, pushing its price down further still.

We therefore have a medium that is our favourite for communication getting a boost as an easily accessible means to produce Internet content that the entire world can find and consume at its leisure. Some opportunities for activism in this field are discussed below.

Telecom

Government and private sector misperceptions of what the poor may want to, or be allowed to consume have prevented appropriate technologies from reaching the poor. In India and in many other developing countries, telephony was for long treated as a luxury, and only in the last two decades has there been gradual acceptance that it is a part of essential infrastructure. In the 1980s, when manned phone booths (essentially shared phones) were introduced, they were a spectacular success even though Indian telecom rates were among the highest in the world. And the Internet can make telephony substantially cheaper.

Conventional telephony follows a model similar to the railroad - just as a section of track is reserved for a particular train passing through, a dedicated circuit connects the parties to a telephone conversation. Internet telephony follows a model closer to the motorway - the spoken message is broken up into small packets, akin to cars, that enter and leave the channel without requiring an exclusive connection. The disadvantage of Net telephony is also apparent from this analogy: when there is a lot of Net traffic, there is congestion, as in the case of any motorway, and audio quality suffers. Then again, conventional telephony spends more than the actual cost of completing the call in accounting, billing and bill collection - expenses that Net telephony avoids. This is why Internet telephony is shaking the foundations of the multinational telecommunication companies⁴.

Internet telephony is banned in India, because it threatens the monopoly profits of VSNL. The drastic drop in telecom prices that Net telephony would bring would not just empower poor people; it would also lead to a dramatic rise in the use of telecom, which is closely correlated with GNP per capita. Clearly, the development of the country is being held ransom by the narrow perspective of a few bureaucrats. This issue needs to be urgently taken up by activists. And there are even more exciting developments taking place.

Computers not long ago followed the mainframe model: intelligence and storage was centralized in a big, relatively powerful computer, while the user access device was a dumb terminal. George Gilder⁵, among others, has pointed out that telecom still follows the same paradigm: the central switch is smart while the telephone instrument is treated like a dumb terminal. The arrival of intelligence at the terminal in the form of the PC pushed mainframes into a niche. Instead of buying time on a mainframe, people paid one-time for a small but increasingly powerful computer on their desktops. A similar development is expected to revolutionize telecom in which we today essentially 'buy time' on the switch each time we make a call. The arrival of smart, small switches - also based on PCs - is beginning to change the paradigm in telecom in a similar fashion.

Based on a wireless networking standard, the so-called 802.11b, relatively inexpensive equipment is available for computers to interconnect over distances that can go up to a few kilometres. Using such equipment, groups of people like Consume.Net in London have started their own wireless networks that provide broadband connectivity for the one-time cost of the equipment. This is an approach that NGOs in India too could easily follow as an attractive alternative to dial-up access to the Internet, which is hopelessly inadequate for their burgeoning bandwidth demands, yet is all that most such organizations can afford. Interestingly, it is very easy and not expensive to get a license in India to use the frequency that such wireless networking uses (in the 2.4 GHz band), so such a network can be set up quickly.

Radio

It is ironic that in the case of radio, where not only the receiver, even equipment for production of content is within the reach of poor people, government monopoly still persists. While some private channels are being licensed, they will work under severe restrictions. For instance they are prevented from covering news and current affairs, and they must pay the government exorbitant license fees. A station in Mumbai must pay the government almost Rs.10 crore (over US\$ 2 million) a year as license fee.

Nonetheless, this area is opening up. Besides private stations, the Indira Gandhi National Open University is starting 40 FM stations in large urban areas, with some time set aside for NGOs. Worldspace has launched the Asiastar satellite, and offers a plethora of channels in high quality. Both of these avenues will seek to maintain some degree of content regulation.

For radio stations on the Internet, satellite broadcasting as a possibility will soon open up. A major advantage of Internet radio is that it can easily incorporate text, pictures, animations, and even limited full-motion video. It is thus suitable not just for dissemination via conventional radio, but also via TV.

This area could certainly do with some activism on the policy front: there is a good case to be made for short-range broadcasting in areas outside the coverage of government stations to be opened up to the local community. A concerted lobbying effort by NGOs is required to make the government open this up.

TV

Most Internet users do not yet have enough bandwidth for full-motion video. Even with this serious liability, the Internet is already providing a taste of its power: NGO organisations such as the Independent Media Centre⁶ have used it to provide an alternative to the establishment viewpoint, for instance during the international protests against the World Bank and IMF in Seattle, Washington, etc.

Sites such as webcamnow.com work imaginatively with the bandwidth restrictions to allow anyone to internationally disseminate TV-like content at a reduced frame rate, and are proving highly popular. Given the strong influence of TV in shaping public opinion, this is an area that NGOs need to keep a close eye on.

Communication and Citizenship

Given the importance of communications in democratic society, denying people access to the means of communication is tantamount to disenfranchising them. Those who do not write well find it hard to get published in the print media, while radio and television severely restrict access to the means of production to members of the general public. Under these circumstances, citizens find it hard to gather and provide others with the information they need to responsibly participate in democratic decision-making. This participation encompasses not just the ritual election every few years, but also access to bureaucracy and the processes for problem solving, round the year. So far, in effect, only those problems which are able to attract media attention are addressed. Once low-cost access to the Internet becomes possible through audio devices, the Internet will allow people to find like-

mind persons, communicate with them without censorship, and organize to have their problems solved.

We are, in short, provided with an historic opportunity to bring into the ambit of the Internet, and that of democratic decision-making, millions of poor people. What is needed is a strong push towards universal access to communications technologies that the poor can afford, and innovative sharing schemes for those that they cannot. A good example of the latter is the *Grameen Phone* initiative in Bangladesh⁷, where a 'telephone lady' in the village is provided micro-credit facilities to buy a mobile phone, which then becomes a shared resource for the entire village. For incoming calls, she simply carries the phone to the recipient, and for outgoing calls, the caller comes to her or sends for her. In either case, she gets a share of the revenue this call generates, and possibly also a tip.

The Indian government, like many others, does not seem to see any possibility of offering telecommunications services in rural areas in a commercially viable manner, and is stuck on the tired formula of cross-subsidy⁸.

Poor people waste an inordinate amount of hard-earned money due to lack of information. The need is for projects based on low-cost modern technologies around the Internet to target poor users - the demand is certainly there. Is anyone listening?

NOTES

- 1 "VSNL set to lose \$600 million in foreign currency post decontrol", *Financial Express*, August 12, 2000.
- 2 See, for instance, <http://speechbot.research.compaq.com/>
- 3 The Rapidly Changing Face of Computing, Jeffrey R. Harrow, July 24, 2000, <http://207.18.199.3/rcfoc/20000724.html> citing Cyveillance's Sizing the Internet study released in July 2000 (<http://www.cyveillance.com/newsroom/pressr/000710.asp>)
- 4 Internet Telephony to grow to \$6.9bn in Asia-Pacific by 2005, <http://www.expressindia.com/fe/daily/20001231/fec31008.html>
- 5 See for instance "Metcalf's Law and Legacy": <http://www.seas.upenn.edu:8080/~gajl/metgg.html>
- 6 <http://www.indymedia.org/>
- 7 *Village Pay Phones and Rural Poverty: Insights from a Grameen Bank Initiative in Bangladesh*, Abdul Bayes and Joachim von Braun: http://www.zef.de/zef_deutsch/f_first.html
- 8 New Telecom Policy, 1999-2000: http://www.dotindia.com/flash/NewTelPo_Details.htm - Universal service obligation.

"... The greater part of the net is capitalism as usual. It is a site for repressive order, for the financial business of capital, and for excessive consumption. While a small part of the net may be used for humanistic purposes and to resist authoritarian structure, its overall function is anything but humanistic. In the same way that we would not consider an unregulated bohemian neighbourhood to be representative of a city, we must also not assume that our own small free zone domains are representative of the digital empire. Nor can we trust our futures to the empty promises of a seducer that has no love in its heart."

CRITICAL ART ENSEMBLE
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Wetware: Bodies in the Digital Domain



Touch: Wetware, Ubicom and Nanotech

JULIANNE PIERCE

"The boundaries between the subject, if not the body, and the 'rest of the world' are undergoing a radical reconfiguration, brought about in part through the mediation of technology".

Allucquere Rosanne Stone

from Will the Real Body Please Stand Up? Boundary Stories about Virtual Cultures

The subjects of this paper are most probably users of the Internet or readers of *Wired* and *GeekGirl* - who are already engaging in the formation of cyber subjectivity. As a computer user I am interested in the relationship between the user and the computer, and especially what sort of subjectivities are being acquired or learned by the computer itself. I am interested in the relationship between the wetware and the hardware, and what will happen to computers as they get smaller and smarter - when we will no longer touch computers, but they will touch us - from the inside.

To think of technology and, in particular, computation, is to think of hard tactile surfaces. It is to think of a tangible, object-based relationship between the subject and her machine. She (the 'user') sits in front of a sedentary object (the 'computer') and interacts with it using a keyboard and mouse. She touches the inside of the computer through the tips of her fingers and sees the results through her eyes. The computer becomes her agency of subjectivity as she translates ideas and thoughts through a processing unit embedded within the concealed interior of the machine.

Programmers and computer artists have in common a desire to go inside the machine. Programmers understand the machine as ones and zeroes, strings of code which output as graphic and textual material. These ones and zeroes are the organs of the computer, the circulatory system which pumps information through the networks of wires and command processors. The artist manipulates these tiny digits and creates a reflection of her own subjectivity. The computer as agency is seductive and powerful, as the ones and zeroes transform and manipulate subjectivity outputting as an altered state. In the techno-imagination of the late twentieth century, there is a desire to go beyond that surface - to imagine the computer as a soft permeable membrane which the user can merge with and pass through. The desire to merge with the machine is in fact a contemporary pre-occupation. In this fantasy the computer becomes liquid and translucent, the user moves beyond the interlace and enters the machine. The computer is a body. It is (well almost) a lover. The obsession with virtual worlds and the proliferation of text-based on-line meeting spaces is an extension (or part of) wishing to enter the computer. The fantasy of touch becomes much more powerful when the user visualises entering the computer and feels it from the inside. Like a lover, the computer becomes an object of lust - hard and dry on the outside, wet and warm on the

inside. The computer is about to enter us and return our touch.

As Allucquere Rosanne Stone suggests, "The boundaries between the subject, if not the body, and the 'rest of the world' are undergoing a radical reconfiguration". In light of this, it is interesting to explore how subjectivity may be shifting due to the impacts of technology, and how existing boundaries between the subject and the body are undergoing a change. Contemporary critical theory has dealt extensively with the idea of subject, destabilising humanist notions of the 'individual' self, to see subjectivity as determined through language and cultural discourses. As with all historical shifts in culture, new subjectivities have emerged, informed by the various cultural influences pertaining to that time. With the current emergence of the technological society, there seems to be an obsession with what sort of subjectivity will emerge in tandem with developments and ideologies of the time.

A certain subjectivity seems mapped out for us already. The influence of Gibson's *Neuromancer* has been phenomenal in informing a certain cyber subjectivity - whether in the future we will be net cowboys jacking into virtual worlds and speaking a bastardised cyber language is pure speculation - but the impact of the literary imagination in informing subjectivity is relevant to this discussion. Perhaps one cannot be too cynical about the impact of cyber-fiction, as literary works throughout our history have either chronicled or impacted on the emerging subjectivity of the time. Gibson and other writers such as Neal Stephenson in *Snow Crash* adopt the rhetoric of the time and expand it into a futuristic landscape. These writers explore the subject of cyberculture from both an ironical and playful position. Ironical because it is fiction which extends and imagines what the future could be like based on contemporary projections of that future. Playful because language and narrative is manipulated into a hyperstate informed by the current explosion of cyberspeak. Both of these writers imagine what cyberspace may be like in the next century, built upon the foundations which are fuelling the imagination of Generation X. The following is a quote from *Snow Crash*:

"As Hiro approaches the Street, he sees two young couples ... He is not seeing real people, of course... The people are pieces of software called avatars... The couples coming off the monorail can't afford to have custom avatars made and don't know how to write their own. They have to buy off-the-shelf avatars... One of the girls has a pretty nice one... The girl is a Brandy. Her date is a Clint... When white-trash high school girls are going on a date in the Metaverse, they invariably run down to the computer-games section of the local Wal-Mart and buy a copy of Brandy. The user can select three breast sizes: improbable, impossible, and ludicrous. Brandy has a limited repertoire of facial expressions: cute and pouty; cute and sultry; perky and interested; smiling and receptive; cute and spacy. Her eyelashes are half an inch long... When a Brandy flutters her eyelashes, you can almost feel the breeze".

In the world of *Snow Crash* and in Stephenson's parody of cyberspace - 'the Metaverse' - a hierarchy of subjectivity exists. At the top of this hierarchy are the programmers who are able to build and manipulate their own characters. And down at the bottom are everyday computer users who, when they jack into 'the Metaverse', must use custom made avatars. Those that do not have sophisticated programming skills are relegated to purchasing their online subjectivities from the shop-shelf. The myth that online personas transcend class, race and gender in cyberspace is just that a myth - for the social and cultural hierarchy replicates, if not enhances social reality.

At the same time however, programmer or not, 'the Metaverse' is a fantastical and seductive fictional world. It is like magic, the ultimate fulfilment of the desire to escape the body and recreate yourself in any form or shape you desire. But of course the body does not go away - this lump of flesh remains, ready to be moulded into identities informed by online cyber activity. Already this merging has begun, as net junkies take on their online personalities in real life. They are feeding themselves into the computer, churning their identity around and reassembling it as it comes back at them from the terminal. The body in a way becomes a repository for downloading digital information and what happens to you online can affect your real life persona.

Interaction is the physical concretisation of a desire to escape the flatness and merge into the created system. It is the sense in which the 'spectator' is more than a participant, but becomes both participant in and creator of the simulation. In brief, it is the sense of unlimited power which the disembodied simulation produces, and the different ways in which socialization has led those always-embodied participants confronted with the sign of unlimited power to respond.

As a regular MOO (Multi-user object oriented domain) user, I find that what happens to me online does impact on my everyday life. At times it is great fun but at times the hierarchy, which exists in virtual communities, can be quite intimidating. In the virtual community of LambdaMoo - probably the most well known and highly visited MOO - a very definite hierarchy exists with programmers at the top and 'newbies' at the bottom. The advance programmers take great delight in manipulating and 'spoofing' new players it is almost like an initiation into a secret club - where if you pass the first test you are admitted. One of my nastiest experiences was to be shot by another character and then teleported out. I was in a room with several other people having a discussion and another player didn't like what I was saying - he warned me that he would do something to me but before I could respond he had pulled out a gun, shot me, spilt my blood all over the floor and then removed me to another room. If it that stage I had better programming skills I could've retaliated and done something just as evil to him.

The interesting thing for me though was how it made me feel in real life. Even though it was my virtual persona that had been shot, I felt angry and hurt at this violation of my space and character. It felt like a violent and antisocial act, where a character wielded power over me by the use of his superior computer knowledge. It was in LambdaMoo that the infamous 'rape in cyberspace' occurred, and I can understand now how this could've happened. By a character exerting complicated programming skills, another character can be manipulated and 'attacked' through the words and actions of another player.

My experiences on the Net have not made me nervous of 'surfing the net'. Rather I have attempted to become a part of this floating world and now have my own programming bit on LambdaMoo. I believe that is important to embrace new technologies, learn how to use them, and then manipulate them for our own use. The rhetoric of the information age is both technophobic and technomaniac - and they operate together. As we strive to embrace the rhetoric of the future, there is also fear at how this future will affect our lives. This rhetoric is surely touching many people, creating a certain desire and expectation, and at the same time a great degree of uncertainty. An inherent element of technophobia is the loss

of identity - that technology will somehow disempower the individual.

In an ironical note however, the technological age hammers the last nails in the coffin of modernism and propels us towards a post-human future. In this chaotic and crazy late-twentieth century world, we can no longer talk of the unified self, and must, I believe, muck up, play around and hack any notion of a monolithic coherent identity. So, as the human becomes post, computers become smart. Artificial Intelligence (AI) is programmed and the computer begins to learn. But how smart will they get and how fast? There's probably no point in asking; they will get very smart and very soon. Smart computers and artificial intelligence will eventually be all around us - in our homes, in the streets, and inside of us. Tiny little micro-sized nano-robots will live (like miniature Terminators) in our bodies, cruising for viruses and disease. My research unfortunately hasn't extended so far as to know what they actually do when they track down the offending organisms - whether they are able to kill them or if they just go to your brain and tell you to go the doctor - or perhaps they are connected to the agent in your telephone and can instruct your phone's agent to ring your doctor's agent to make an appointment. (Agents are artificial intelligences which never sleep - they live in computers foraging out information and act on behalf of the computer user). Another form of AI which will most probably permeate our daily existence is ubiquitous computing. Rich Gold, a researcher at Parc Xerox in Silicon Valley says of ubiquitous computing, "In the ubiquitous computing world the computation becomes embedded, gets forced into the surface of the phenomenal space, becomes tacit, where you act upon it and work with it without thinking about it as computation - there's lots of it and embedded in our daily social life, so that you do not have turn away from your life when you begin to use computation...Ubiquitous computing objects and environments are sensuous, they feel the world, they're reactive, they talk to you, they're communicative, they're tacit and they're colonising".

In this scenario, the computer is no longer an isolated object, but is a part of things - or rather becomes things. A fridge will be a computer and a computer will be a fridge. The nature of interactivity as we know it now is obsolete - we no longer interact with computers, - they interact with us. They monitor us, feed us, know what we like and when we want it, know what we watch on television, set the VCR to tape our favourite programs and undoubtedly a whole lot of other things. The computer user will have no power over the computer, will no longer touch the computer to command it - it will react to us through much less tactile means - it will respond to our voices and our pheromones. It will sense our moods and probably talk to us.

So in this ubiquitous computing world, the computer is no longer a passive receptor, its agency is transforming and shifting as the machine takes on identity - but what will this identity be? When the computer begins to make decisions, will it formulate it's own identity -will it create it's own subjectivity? Will it be like that ubiquitous all-seeing computer HAL, moody and jealous, silent and brooding? Or will the ubicom's personality be programmable to suit the mood of its human mistress. In Rich Gold's vision, the computer becomes an active part of our everyday lives. Human subjectivity will be informed by our relationship to our computers, and in turn the identity of the computer will take on characteristics of its co-habitator and undoubtedly modify them.

New Maps and Old Territories

A Dialogue between Yagnavalkya and Gargi in Cyberia

MONICA NARULA + SHUDDHABRATA SENGUPTA



I

We grew up hearing many kinds of stories. Stories of wise animals and stupid gods, arrogant kings and generous subjects, magical machines and speaking trees.

We grew up hearing the story of the wise man called Yagnavalkya and a wise woman called Gargi. And their conversation is a section in the *Upanishads* - texts which started out life as being interesting and elegant conversations in places where those in retreat from the world could gather (not unlike some chat rooms on the Internet today), and ended up dead as part of a formal philosophical canon in later Hinduism.

Both Yagnavalkya and Gargi were philosophers, natural philosophers, and while it was considered odd that Gargi, forgetting her 'woman' self should argue about the nature of 'being' itself, she did. And in this argument Gargi asks of Yagnavalkya again and again, so what is the web on which the world is woven.

This fragment of the *Upanishads*, the sit-here-and-listen parable of secret wisdom, is here re-configured for the third millennium of the Common Era. This *Neo-Upanishad* is a new source code, a manual of digital ontology, a map of how we might come to be. Imagine a new *Bhadaranyaka* Section (The Debate at the Crossroads of the Great Forest of Cultural Code) where sit two re-configured avatars, gendered male and female, named Gargi Vacaknavi (The maker of new codes) and Yagnavalkya (Keeper of the sacrificial flame of pure code). What we want to say is like the small, unfinished conversation between two people who once allegedly occupied finite, distinct bodies - one male, one female.

Yagnavalkya talks of how man invented self, and so brought about other. He speaks of how self, *purusha*, *atman*, *Brahman*, consciousness, mind pursues other, *prakriti*, speech, body, form and how she (other) changes her shape, re-writing her operating instructions, every time he (self) makes a new programme, a new release version of her. He encrypts, she decodes. She is software, a virus, free to roam and pirate herself, he stays

hardwired, logged out and locked into himself. He pursues her, pins her, wins her, she runs away into the jungle of code again. He seeks her out yet again, and in the middle of his endless postulation of the real self and the self that is virtual, the other, her-self, he says to her: Gargi, silver tongued, chat room diva, endless whisperer, cyborg siren, look - the two of us are like two halves of a block, hardware and software, one and zero, man and machine, and between us dangles the web of the world. The World Wide Web. The mesh made of strings of code. Cyberia.

Then Gargi Vacaknavi began to question him, "Yagnavalkya", she said, "tell me - since this whole world is woven back and forth on strings of knowledge, threads of code, what then is the net of code and knowledge woven on. Where on the map is Cyberia?"

Y: "Knowledge and code are woven back and forth on the minds that made the code, on the accumulated electricity of millennia that went into the making of thoughts, that was written down, encrypted, encoded, streamed into machines, read and learnt and transmitted and taught and downloaded".

G: "And on what was that woven on, that mesh of thought, how did that get fabricated?"

Y: "On the little fissures where wealth and meanings, both of which we call 'artha', in Sanskrit, gather between keystrokes".

G: "And where did money and meaning come from?"

Y: "From the worlds of hands weaving back and forth, from the intermittent movement of eyes, both awake and rapidly dreaming, from neo-cortical storms, and from the stream of blood, within and without...".

G: "And what moves these joints, works these muscles and tendons, what makes this flow and ebb and stream?"

At this point Yagnavalkya told her, "Don't ask so many questions, Gargi, or your head will shatter apart! You are asking too many questions about that (the deity) of which it is forbidden to ask too many questions. So, Gargi, don't ask so many questions..."

It is said then that "Thereupon, Gargi fell silent".

This conversation arises from a recognition that cyberspace has suddenly posed strange and new questions even within those of us who live at it's farthest frontier, for whom connectivity and access to computers, and to the space they create between them, is not an easy dial-up option. We share computers, and e-mail accounts, and navigate the private spaces that we have created within our computer. We come from a situation where the scarcity of computers, the cussedness of phone lines, the fluctuating voltage and the simultaneous rush to be on a machine so as not to be rudderless in the world demands that several people share the same machine. At one time we were seventeen people logging on with the same ID. We are not mere cyborgs; we are evolving constellations of cyborgs. This makes for a proximity that is not unlike looking into each other's cupboards, and closets, catching the whiff of intimate traces of thought and feeling. This has made us look at each other and at ourselves in a new way. We, as a man, and as a woman, are beginning to ask of each other the question "What is the ground we stand on?" What are the conscious and unconscious flows of sensory and extra-sensory data between our bodies and minds, and within our common machines that shape our changing - neither binary nor unitary - natures.

II

Two clusters of images for two kinds of migration.

A person steps off a train into a city of fourteen million people, looking for the comfort and the freedom of anonymity, wary of loneliness and the scrutiny of unwelcome surveillance.

A person finds a patch of wall in a shantytown, off a busy street and builds a shelter with tin and packing cases, begins a new neighbourhood, changes the map of the city.

A person clocks into a factory, makes up a new name and invents a new self, fills in forms saying: single, childless, temporary worker, migrant, no permanent address...

A person switches on a computer, logs on and toys with a new password. She is looking for the comfort and freedom of anonymity and is wary of loneliness and the scrutiny of unwelcome surveillance. She builds herself a shelter, calls it a website; she begins a new neighbourhood, calls it an online discussion forum, she changes the map, she clocks in at work, and a new day begins at the virtual sweatshop.

In a sense, all those who venture out into cyberspace for the first time are stepping out of a train into a new metropolis. They are looking for the freedom of anonymity, wary of surveillance, building shelters and neighbourhoods, clocking in, changing the map.

Given that the Internet began as a playground for men in suits, lab coats and uniforms, all others - women and men without suits, lab coats and uniforms, and just about anyone else who is not a part of a networked transatlantic matrix, someone who lives in time zones and meridians on the outer reaches of cyberia, is really a recent immigrant.

It is the malediction of many migrants in the real world that in the new destination they are too often forced to become exiles or indentured into the workforce, where the act of leaving becomes a gesture poised on the thin line between free will and despair. Many of us too may have left the everyday battles for survival, dignity and recognition somewhere in order to chart a new continent of being, and the world. But when looking back from cyberspace into the everyday, what are the relationships between 'virtual' and real 'selves' that we now see and seek?

Is the virtual self of the on-line person only an avatar, a multiplied polymorphous androgynous cyborg amazon realizing liberatory visions, or is she also a networked data-drudge, divided and multitasked within herself as she logs on to supply and reproduce labour power in a digital pan-capitalist global marketplace. For long she has been the vehicle for the reproduction of living labour. Is she now in danger of being trapped into being the vehicle for the daily reproduction of virtual labour?

Further, is the interface that some of us initially welcomed as the possibility of transcending the determinations of biology, also returning to menace us with more bionic shackles in the prison house of gender. The web, for instance has come a long way from being the playground of gender identities. The remaining spaces for play and experimentation with online identities are becoming increasingly sidelined, as e-commerce, with its relentless search for marketing niches within marketing niches, underscores and amplifies the accepted notions of who we are.

Far from the transcendence of gender, we now have a proliferation of 'acceptable femininities' that address and hard sell safe images of 'womanhood'. We are not talking of the sex industry on the Internet, but of mainstream 'women's portals' because these are the sites that women are being asked to walk into by aggressive media campaigns. This is where the real action of e-commerce and household linked purchases and lifestyle products and the cosmetic industry really is. This is really where women are, and are being placed, on the web.

Of course the beauty of pointcast marketing is that every time you log on, your gender becomes an issue, and you fill in a form that asks you your sex, and while your personal details get farmed by data trawlers, you, your gender and your correlative consumer profile becomes means for the creation of value. Because, every woman, every calculable entity, who logs on to a woman's portal is in a sense making room for the next customer, just by being a taxonomically appropriate female. Her presence is value creation. So you are working while you shop on line, and it's such a delight that you don't even know it, and nor does anyone else, but for those who farm your life. In a way in which domestic labour was always 'unaccounted for' in the textbooks of political economy, so too the shadow-work that is a part of the simple fact of gendered presence on the web is an unaccounted reality of cyberspace.

The last six months in India have seen the rise of at least ten competing women's portals - www.smartbahu.com, www.icleo.com, www.ajisunteho.com, www.mysakhi.com, www.chaiwalli.com, www.today'sindianwomen.com, www.seetageeta.com, etc. And many more are planned as the Internet burst takes hold. These portals target different aspects of the online feminine. There is the portal for the teenage girl, advice about dating games, parental issues, school scores, cosmetics, fashion, and boy bands. The portal for the bride to be - how to get your trousseau in order, lingerie, mother-in-law issues, dowry issues, how to fake an orgasm on your wedding night, conflict resolution, agony aunts. The portal for the mature middle-aged house wife - pickle recipes, spirituality and health food, and then portal for the corporate woman - how not to antagonize your boss, handling emotions in the workplace, the art of writing the perfect CV, etc.

Each of these portals has a section called 'Career' where women are told about how the brave new world of InfoTech will mean that now they can be even better 'good' mothers and wives, and also earn money by logging on to piece rate work from the home. The shadow work of logging on - pages per view, hits per day, the further creation of value. A new version of the putting out system by which you bought a sewing machine to supplement the domestic income by converting the home into a tiny production unit in a dispersed garment factory. "Smartbahu.com" (bahu=wife/daughter-in-law) is particularly interesting in the way in which it invites women to directly consider the options of entering the 'Call Centre' or the 'Medical Transcriptions' industries. These are really the reasons why the new information economy is being pushed in such a big way now in India.

The new economy in our part of the world is cantilevered on a fortuitous accident of geography and culture, and a long history of reading and writing in the English language. While the Internet for some parts of the world maybe 'virtual', its experiential dynamics for us are grounded on the geographical co-ordinates of the South Asian landmass which make

us a workday ahead of the offices and factories in many actual hubs of trans-national capital. Which means that your secretarial labour pool never ever sleeps, it only shifts longitudes. And so you have the emergence of the 24-hour workday, and the time stretched worker. This, more than anything else, is why there are projections of 4 million Internet users in India by 2003, and an exponential growth thereafter.

To give you a simple illustration. You could be calling a General Electric call centre in Britain, and the person picking up the phone at the other end could be a Sunita or a Madhu in our city. She would have been trained to speak in an accent that doesn't give away her location (space, time, ethnicity) and she would be working as a contract worker.

Similarly, transcription work is secretarial assistance at a distance. For example, at the end of the day in the east coast of the United States, a doctor in his surgery can record onto disc via the phone, and someone sitting in the mushrooming IT cities (Cyberabads, we call them) of Bangalore or Hyderabad, or Delhi would take the dictation off the transmitted disc, clean up records, and by the next morning the day's transcripts would be emailed and ready and waiting. Typically, a large number of the people who 'man' the terminals at call centers, at transcription factories, at software sweatshops and electronic assembly lines all over India happen to be women. Because they are cheap to hire, easy to fire. Because the insecurity of their lives as young, often migrant, single women in urban environments that are extremely hostile to young, single, migrant women means that their status can always be used to blackmail them into longer work hours, stringent production targets through keystroke monitoring, lower pay, and lack of job security. These are lives led in the shadow of the glamour and mega bucks of the new economy.

These online lives have their own metronomic rhythm. And this rhythm regulates the ebb and flow of labouring on the net to an extent that makes the net take on a character very different from the freedom that we may be tempted to ascribe to it. Just as the history of Internet navigation has been a series of collapsing interactivities as proprietary software and mega e-commerce portals reach out to try and guide every net event, every act of logging on, thus eroding the autonomy of the surfer, so too, if your primary online experience is one of finger cracking, eye straining labour, then that is the way that the net will trap you, and shape you. And as thousands, and in time, millions more log on to the Internet from home-based work places in India and China, and as many of these online lives become those of networked labouring women, the net itself will change shape. The money being made from mouse clicks will change the meaning of what it is to be online. This is not the future, this is happening even as we speak.

In such circumstances perhaps it becomes all the more important to reclaim the categorical imperative of pleasure, and *jouissance* and affinity for those women and men who labour on the net. If critical reflection in/on cyberspace can reveal the radical disjuncture between work and play in terms of different modes of interacting with the same technology, if it can advance protocols of subversive and transgressive pleasure in workplaces, then it will have reclaimed in some measure the utopian promise of the net. Interventions to take control of our online experience can have repercussions in a much wider arena than just the Internet.

III

We return to Gargi and Yagnavalkya, only a few pages later. And so to their conversation. If Yagnavalkya wrests the argument, he will walk away with all the modems, and set them to graze on the data-pastures of the net, make them big info-fat, live-stock options. If Gargi Vacaknavi wins, she will re-write every string of code and change the world. She will let loose the modems, set free the data-cows. Let us listen.

Then Gargi Vacaknavi spoke: *"I rise to challenge you Yagnavalkya. The things behind the terminal screen, and the things between data and the body, as well as all those things people here refer to as programme, memory, and labour. On what Yagnavalkya are all these woven back and forth?"*

He replied: *"That, Gargi, is the imperishable. And Brahmins refer to it like this. It is neither coarse nor fine, it is neither short nor long, it has neither blood nor fat, it is without shadow or darkness, it is without contact, it has not taste or smell, it is without sight or hearing, it is beyond measure, it has nothing within it and outside of it".*

She responded: *"All honour to you Yagnavalkya. You really cleared that up for me. What then is this imperishable?"*

Then Yagnavalkya said: *"This is the imperishable Gargi on whose command seconds and hours, days and nights, fortnights and months, seasons and years stand apart. This is the imperishable Gargi at whose command monies and meanings flow in their respective directions, some to the east and others to the west. This is the imperishable Gargi on whose command people move between worlds and gods and governors are dependent on sacrifices, on ancestral demands and living offerings.*

This is the imperishable which sees but can't be seen, which hears but can't be heard, which thinks but can't be thought of, which perceives but can't be perceived. Besides this imperishable, there is no one that sees, no one that thinks, and no one that perceives.

On this very imperishable, Gargi, space and cyberspace, the space between the terminal and the body, the space between control and enter, abort and retry, are woven back and forth. This, Gargi, is the integrated circuit of Capital".

Thereupon Gargi Vacaknavi fell silent.

Today, as larger swathes of industrial manufacture become a matter of dispersed assemblies, fluid inventories and just-in-time delivery, the proportion of networked key-strokes that will assemble everything from automobiles to GM foods to fabrics will rise. And, alongwith, will rise a new global proletariat of cyborg-women-men, with prosthetic arms that marry robotic speed and involuntary movement with human faculties of discrimination. So much so, that the cyborg will be worker and supervisor split within herself, with instructions from a networked-command-control-communications and intelligence node delivered via the Internet and made to interface with her own neuro-muscular co-ordinates in order to create a complex matrix of voluntary and involuntary movements on the virtual assembly line.

In a few years time, prosthetic arms will very easily find favour in the factories that ring our cities, and they would re-problematize Gargi's nagging questions about the relationship between discrete sentient entities and transcendent consciousness, between the resistance of the self and the tug of the other on the prosthetic arm.

Imagine tissue farms in South Asia producing bio-technological products and organ

supplements from a dispersed assembly line of networked female bodies. The invasion of microchips into the human body may have begun at the intersections of digital arts, fashion and cybernetics, but it could with ease find suitable industrial applications, giving rise to factories of fertile women who will have to tap their key boards, monitor their fertilities, and enter, enter, enter data. Is this a scenario that a migrant will be soon be leaving her home to enter? A recently uploaded website already offers people payment for contraceptive usage, and we know of the website that sells eggs from comely, ethnically classified women (www.ronsangels.com). How far is it in the future that we will witness the booming marriage of convenience between e-commerce, genetic engineering, eugenics and assisted reproduction? In the place where we come from, the take up rate for technological interventions in reproduction has always been high, and female foeticide and the availability of ultra-sonography have had a close statistical relationship. How much longer will it take for websites that advertise and guarantee male embryos to get into business in the backstreets of Delhi?

A migrant in the real world remembers 'home' with longing and therefore participates in a parallel economy of gifts, remitting letters and new found resources back home. But is it that instead of remembering and remitting, much of our online being is lived out in evading the home where we came from? Is the condition of migration into cyberspace already becoming a condition of exile? Many of us endow the cyberspace we are migrating into with our longings and desires for a better world, but this is a journey that we undertake not once or twice in a lifetime but once or twice or many times a day. What are the letters and gifts that we will send back from these journeys?

There is a lot of money and meaning being made in this world between the keystrokes. Money and meaning that imprisons women and men, hardware and software, machines and codes. And consequently, there is a lot of work to be done to reclaim online presence from the territory of an exiled imaginary, and invest it with meaning in such a way as to make it mean real things for most real people and for some cyborgs.

We believe that we must ask the 'too many questions', even of our own assertions, as Gargi has always insisted on doing, even if this results in a systems crash, in a shattering of our heads. In that shattering may well be unleashed a whole new repertoire of things that we might become - incomplete, fragmentary, neither men, nor women, nor machines, and yet find ways of situatedness and connection more fulfilling than the binary oppositional units that we are accustomed to inhabiting.

To lapse into even ironic silence is to be lost to the possibilities that await us.

On the Shopfloor

A personal account of work in the IT industry: India

JOY CHATTERJEE

I worked in a prime Information Technology Company for two years. IT companies are said to be like heaven for workers. Freedom, creativity and play are the kind of words you get to hear in any description of an IT workplace. After all, it is said, this new workforce works in a state-of-the-art environment with luxuries such as air-conditioned shop-floor, uninterrupted Internet connectivity, e-mail, music, free coffee & tea and so on. Working hours are said to be flexibly designed to suit the workers, and the work highly creative.

In the following write-up, I am trying to examine the truthfulness of these claims about the IT industry.

Description of the work process

The work process in the factory I worked in was organised in the following manner.

1 The hierarchy of the production line

Management Staff

- > **Divisional Head:** Permanent Post - Manager. Responsible for all kinds of projects.
- > **Project Leader (PL):** Permanent Post - Supervisor. Projects are divided into categories, and responsibility for each project is given to an assigned Project Leader.
- > **Group Leader (GL):** Permanent Post - Junior Supervisor. Project Leaders distribute their share of projects to their subordinate Group Leaders. These people plan the schedule of the projects according to guidelines set by productivity norms.

Non-management Staff

- > **Project Owner:** Temporary responsibility - Worker. Group Leaders select a particular worker to handle each project. This person is held primarily accountable for the fate of the project.
- > **Peers:** Temporary responsibility - Worker. Project Owner is provided with a few peers for the production of the project. Sometimes the Project Owner is him/herself supposed to produce the whole project, and no co-workers are provided.

2 Division of labour in the projects

- > **Info-searchers:** Group of people who do research on the subject, and provide the basic framework of the project.
- > **Instructional Designers (ID):** They write the scripts on the basis of the framework provided by the Info-search team.
- > **Graphics Designers (GD):** Graphic designers first visualize graphics on the basis of script, and then create the graphics.

- > **Constructors:** These people assemble the text and graphics together to shape the final product.
- > **Testers:** After the product is ready, testers test the constructed project for any defects.
Testing is also done at every level. For instance, after the script is ready, it is tested and scrutinized by Subject Matter Expert (SME). Similarly, after the graphics are created on the computer for delivery to the constructor, the group leader of the particular team reviews them for graphic and aesthetic standards along with the SME.

3 Organisational mechanisms of work

- > **Deadlines**
Each step of production has its specific timeframe according to guidelines set by productivity norms, and this is called the Deadline. For example, 45 graphics are supposed to be made within one day. If a project has 600 graphics, it means that the graphic designer is supposed to complete his/her work within 13.3 days. Everybody, from the Info-searcher to the Tester, has to follow the set productivity norms. And the whole project, of course, has a Final Deadline.
- > **Bug Report & Review Changes**
After each level of testing, the concerned worker is provided with a bug report that spells out mistakes that have to be fixed within the timeframe of the running project. The final bug report, which is supplied after the completion of the project, eats into the timeframe given for the next project. No extra time is allowed for any changes that may be required. This continuous process of responding to the bug report for the old project/s, and the execution of the new project, always run simultaneously. Therefore, an extra two to three hours of work is informally mandatory for these 'fixes'.
- > **Training Sessions and Meetings**
Frequent training sessions and meetings come in the way of the project schedule, and for these too, no separate time slot is assigned. These are generally (especially meetings) scheduled for the first hour of the day. Thus the quota of the day's work inevitably takes up more time than the nine-hour workday.
- > **Productivity Norms**
Productivity norms for a project are fixed at the supervisor's discretion. The method of deciding new norms is usually as follows: The supervisor calls for an informal meeting, and then bargains with the workers on output quantity. The bottom line is this - Output should be at least x times more than the previous year's output, if not double. For example, if last year's output has been 25 graphics frames per day, then this year there have to be 45 graphics frames per day. When they begin to bargain, supervisors usually start with double the figure, or even more, but gradually agree to come down to the figure which higher management had probably asked for in the first place! The kind of bargaining that happens here is equal to any bazaar. Since the original quoted figure is set high, workers feel exhausted, relieved and resigned to achieve any lowering at all.
Another thing that needs to be kept in mind is that the bargain for quality has already

reached 'zero-defect' level. Anything below this implies inefficiency, which is penalized.

> **Data Capture**

Every day the worker is supposed to maintain a log of the work s/he has done. This process is computerized, and the data is stored in a common server. Time is quantified as one hour = 1 unit, and thirty minutes = 0.5 unit. Daily work output is fixed at a minimum of 6 units. This data capture plays an important role during the half yearly and annual assessment reports.

> **Assessment**

There is a half yearly as well as an annual assessment of the work done by a worker. These reports take into account Productivity, Quality, Maintenance of Data, and Report of Project Audit. If all these requirements are not adequately fulfilled, the worker is labelled an inefficient worker and s/he is penalized. At the least, yearly increments are withheld.

And how the work process works.

"The horizontal staircase"

The hierarchy of the production line

Although hierarchy within the work-process is distinctly defined, yet management persistently projects an image of non-hierarchical relations within the company. Only the manager enjoys the luxury of a separate room. The PLs and GLs share similar workstations as workers on the shopfloor. However, their workstations are strategically located: either ensuring that their screens are hidden from workers, or located close to the exit door or server room. This helps in a more efficient monitoring of the workforce.

Management staff generally tries its best to maintain this non-hierarchical façade. Due to the similarity of social backgrounds of the workers and the management staff, it is fairly easy for them to do so. There is an attempt at easy camaraderie through jokes, film gossip and technical discussion.

Sometimes, even they tire of these pretensions. The PLs, especially, can't resist asserting their superiority and 'relaxing' during lunch hour. Although workers and supervisors are meant to have lunch together, they are seldom seen at the same table as the workers.

Other indices of difference: Cars are a more common phenomenon amongst management staff rather than workers. Most workers are relatively casual in their dress code, while management is more formally dressed. However, with their bags, baggage, lunch boxes and water bottles management personnel appear to be carrying their whole household with them! And the 'perk' of regular official visits to foreign countries is recounted through a narration of superior facilities, neatness and cooperation of the workforce everywhere else.

"... One of my relatives is a big manager in a company, his every movement and decision is hailed and celebrated in the family. Even when he goes to bathroom family members become as anxious as if the prime minister is going on an international tour..." A fellow worker's comment on management lifestyle.

Inspite of all this, supervisors work hard to maintain the pretension that they 'care'

about the worker, to the extent of trying to sort out even personal problems. In reality, this helps them keep a close eye on the movement and behaviour of workers. The most significant aspect of this practice is to reduce possible 'excuses' offered by workers on personal grounds.

In fact, during any crisis they are relentlessly critical of their subordinates. If a project faces any problems, they instantly locate the cause to be in the attitude of the worker. Their first assumption is that the problem lies with the worker.

"Divisions within workers"

Divisions involved in the projects

The hierarchy of knowledge creates its own hierarchy even amongst workers. Info-searchers, for example, enjoy much higher management esteem than other fellow workers. Performance also plays an important role in interpersonal relation between worker and the management. So do schooling and social background. Workers from more affluent backgrounds are often found to be closer to management.

Workers are categorized in grades. Workers with more experience and better performance are promoted to higher grades. Beginners and slow workers are kept at the bottom. Obviously, the pay slip depends upon the grades. Thus, a kind of perpetual competition is generated in the work place. Workers from both grades are expected to perform similarly, whereas the wage difference between highest grade and lowest grade worker is 1:4.

"To Order & Tame"

Meetings & Trainings

Meetings are generally held in the first hour of the day. One of the prime reasons behind this, as our supervisor said, is 'to make it a habit to reach office on time'. Two important phrases for meetings are, 'to be on time' and 'to be prepared'. It means 'save time' and 'remember whatever is said'. Every one is supposed to come with a pen and notebook.

Meetings are no less than a questionnaire session held by the supervisor or manager. Every meeting is a brain storming session. Meetings are organized to discuss the performance and problems of the company or the division. Any new policy taken by the company is declared in the meeting to mandatory applause.

Meetings are also called to discuss any 'crisis' of the company and help of the workers is 'sought'. And this 'help' is articulated in the form of greater work intensity or further cuts in benefits.

Meetings are the best platform to throw challenges to the workers. Unlike a playground, here challenges are imposed and have to be accepted. Opinions are always asked from the workers in the meetings but within a regimented 'openness'. The very presence of the manager or supervisor ensures that you may talk about a few things but will not talk of certain other things.

Training sessions are fundamentally the prime mechanisms to eliminate workforce 'excuses' including even such areas as communication skills. If somebody is unable to communicate smartly s/he is referred to 'communication training sessions'.

Everybody in the work place has to know comprehensively about the entire production

process. No one is left with the possible excuse of 'I don't know this' or even 'Why should I know this?' Technical workers are given training on non-technical subjects and non-technical workers are acquainted with technical know how. Sometimes, these training sessions are disguised so as to anticipate workers' behaviour. Through explanations of and discussions about the production process, management induces the workers themselves to locate the gaps in the production process. It encourages them to make suggestions, and then ensures that these gaps are filled up. Management never accuses anybody for being anti-work, it is said, and it is taken for granted that every worker is dedicated towards the company. It is just that they are a little 'laid back'.

Management skills are also imparted to workers in order to internalise discipline and organizational rules. Even psychological training is imparted so as to determine or construct the cause of 'low level of present productivity'.

"The Fishy Market..."

Productivity Norms

One day, in 1997, our divisional manager called the workers from all divisions to tell us the story of China. There, he said, production is extracted at gunpoint. He then compared it to our good fortune of not being controlled by guns. But, he added, we have to find some method of increasing productivity without guns, since we have to match them output for output.

"So", he said, "let us dream of major leaps in productivity. Say a 1000% or 2000% increase. It is only if we dream like this that we can manage a 500% or 750 % increase".

Small groups of workers were then organised and commissioned to develop pilot projects to achieve such productivity levels using 'Tools Technological Development', 'Process Compression', or any other old or new method. And this 'challenge' was taken up by the creative and energetic workers...

After much research and experimentation, a great leap forward happened at all levels. New software was developed, the production process was redesigned, and discipline was rigorously imposed on leaves and office timings.

Pilot projects achieved 100% to 200% increase in productivity. Pretending disappointment, management implemented this increase in productivity all over the factory.

At the year-end meeting of 1998, graphic team members working on specific kinds of projects were called for a meeting in the Conference Room. The GL for those projects and the Graphic Project Leader (GPL; Supervisor who leads the whole graphic team in the division) delivered inspiring lectures on previous year's successes, along with data and charts as proof. However, at the end of the lecture the GL threw a challenge for the next year - "we have to be able to produce double".

Workers this time were not very keen to take on this 'steep challenge'. They bargained for a mere 50% increase. The GPL retorted with data about competitors of the company. Competitors in remote sections of the globe were supposedly producing at quarter the rate of the company. If the company didn't at least come down to half the cost, 'the contract might then be lost!' His serious face had tremendous power. Workers were slowly convinced, but with humane consideration productivity was increased only by 75%.

Needless to say, wages were never discussed in this entire process.

Productivity is never linked to salary. Instead, increase in productivity is projected as a necessity to survive and to be on top. Consciousness about company status - "To be on top!" is constantly propagated to generate consensus for further increase in productivity. The More you Produce, the More you Rise in Status!

"... and the bargain"

Annual Assessment

The time for excuses and justifications. And, of course, denial.

The annual assessment report is divided into two sections. The first is the Individual Effective Feedback (IEF). In this section, team members are divided into groups and are supposed to give feedback to each other. It is done through a computer network. A list of questions is delivered to all workers, subdivided into categories such as communication, cooperation, performance, group activity etc. Each worker has to allocate points against each question for every peer. Name of the GL and PL are also included in the list. This means that workers have to give feedback on their supervisors as well.

To maintain the 'truth quotient' of the feedback, management claims that the IEF is not included in its annual assessment. However, every worker knows that this is not true. So they apply themselves to the IEF fairly 'creatively'. But if everybody gave full marks to every body else, then management would demand that the feedback form be filled up again. To prevent this, workers give higher points to those who are closer or friendlier to them. Unfortunately, workers who are not popular can suffer a great deal in this process.

The second part of the assessment is meetings between the GL and the workers. At this point, every aspect of the workers' performance is scrutinized. Achievements (productivity, quality, other responsibilities, audit etc.) are graded in three ways:

>M, M-S and S-O (below standard, up to the standard and above standard).

If a worker is graded as >M, the supervisor then enquires the reason for being so below standard, if M-S is achieved then the worker is asked why s/he didn't achieve S-O. Even if S-O is achieved, questions arise regarding group activity, communication etc.

Generally, reluctance to work and inefficiency are defended by workers through 'petty excuses'. Health, family problems, misunderstandings, miscommunication, etc. are presented as reasons. But management is always equipped with a ready answer to these problems - 'lack of dedication'. These meetings go a long way in making the worker believe that machine problems, physical limitations, heavy workloads are all just lame excuses. The real problem is attitude!

During these sessions, a number of personal questions are also asked to make the worker comfortable with the overwhelming aggression of the event. The worker fills up a six-page form, which includes level of performance, achievements and regrets, future plans and ambitions. As well as next year's training program. And redefining next year performance standards. The most important thing is that the worker himself/herself has to grade his/her own performance. The Supervisor allegedly only guides the worker through this.

Though productivity increases by leaps and bounds every year, wages do not. They have no bearing to the worker's productivity. Wage and increase in productivity act as inde-

pendent functions. The intriguing juxtaposition is that during productivity-defining meetings workers are valorised as 'members of the family' but during assessment sessions they are suspected as 'work thieves'.

"... The Info-searcher gave an estimation of 400 graphics while creating the graphics construction schedule, but during visualization I came out with 200 frames only. Thus according to schedule I had 10 days but actually I needed five and half days. I didn't disclose this to my GL, but during my assessment session he had all the data from the PL and grilled me on this issue. And I got >M". An unfortunate worker's confession.

"You can never win in this game, it's the only game in the world where you always lose". Frustrated worker at the end of the four-hour assessment session.

"The Death trap"

The Deadline

The Deadline is divine; nobody can challenge it. It rings like a prophet's doomsday call.

If the server has crashed, a virus has attacked or any technical problem has occurred, it is obvious that it is the worker whose data is affected who has to work late and recover this loss of time. Extension of the deadline is beyond imagination.

If somebody takes leave, it means double responsibility for his/her peer. This results in internal conflict between workers, creating suffocating work situations. This is inevitable because one can only expect understanding from one's co-workers for a reasonable number of planned leaves.

Managements also connect the deadline to the contracts with their clients. It is said that if the deadline is missed, the company has to pay a penalty to the client. And the penalty will obviously reflect on the workers' pay slip. This builds tremendous pressure on the workers. They try their best to finish their job within the deadline. Any delay by any individual worker puts the whole team in trouble. Thus every one is pushing each other all the time. The astonishing thing in this scenario is that often enough supervisors are replaced by the workers themselves! The supervisors have done their job merely by fixing the schedule.

"Bugs"

The Bug reports

"After we die bugs come to our coffin and feast on our dead bodies".

Each project has at least three to four levels of testing. Some are internal and some are external. To start with, tests are done by the subject matter expert (SME). Then, on the basis of guidelines provided by the client, testers scrutinize the project. After internal testers pass the initial stage, it goes to the client who checks it thoroughly. After that the next stage starts. Sometimes, this next stage starts even before the report comes from the client because of time pressure. After the project is over, it is scrutinized thrice internally and only then is it sent to the client. The client goes over the final product again, and if s/he finds any problem at this level, the company is penalized for each mistake. It means that by now the project has to be zero-defect.

From all these check points workers get thick lists of test reports i.e. bug reports. All bugs have to be rectified parallel to the already running projects. Often bug reports don't

reach the worker in a systematic way. To meet the construction deadline, testing runs parallel to scripting and graphic creation. As soon as one section is done, it goes for testing and while the next section is under construction the report for the earlier section comes up. At the first level of testing, the possibility of changes is 60% to 70%. Thus the workload actually increases by double. And by the end of the last section, bug reports pile up to such extent that they demand another project schedule altogether.

However, there are no extra days for these reports to be fixed. No extra time is planned in the project schedule for the bug report and the changes. These things have to be done within the same time frame. In truth, workers are actually working at higher levels than defined in any productivity norm.

All of these things result in long working hours, late night stays and a surrender of holidays.

"Soul capture"

Data capture

The automation of supervision.

Even though the workday is fixed from 9am to 6pm i.e. nine hours, late night stays and sometimes skipping lunch make it ten to twelve hours long.

Through a computer network, a database is maintained to monitor every worker's productivity data on a daily basis. The software which is used for this purpose has built-in information about project code, kind of work, delivery options, etc. and the worker has to fill the time span s/he took to complete a particular job. Even tea and lunch breaks are defined in the software. Once the data is punched in, it cannot be changed.

Initially most workers used to avoid this data capture. But very soon it was made mandatory. Management may claim that this data capture has nothing to do with assessment, that they use this data as a yardstick to estimate and plan future project time-line, so that they can provide the client with a more accurate date for the deadline. But every worker knows that when assessment time comes, this data will become yet another management weapon.

I have tried to describe how my body and my mind were controlled in those two years. But I haven't even spoken of the other 'invisible' effects. The ever-increasing speed of productivity has taken its toll on my body. The hours of constant keyboard and mouse manipulation have resulted in spondylitis and arthritic problems. My back, my finger tips, my neck have all suffered. Obviously, management had always been aware of these repercussions. They had constantly supplied us with tips on health through emails and graffiti. Even aerobics were conducted to enhance our physical capacity!

But the really sad thing is my present relationship to music. Since music increases the speed of work and lessens the monotony of repeated typing and punching, it became a repeated infliction. Now it's difficult for me to listen to music and not type on my non-existent keyboard.

South Asian Workers in Silicon Valley

An account of work in the IT industry: U.S.A.

RAJ JAYADEV



"Hurry up Line One! You are not here to talk, you are here to work! GEE-VAAAN WHAT'S THE HOLD UP?!" The tone and ferocity of her words always carried a certain violence. They were intended to elicit immediate obedience, the way a prison guard uses a nightstick, or a slave master would a whip.

Jivan had only been at the plant for a few months, but he had grown accustomed to the daily harassment by management, so he simply did what was commanded of him and went back to stocking the conveyer belt with printers. "You know, in India workers would not stand for this treatment", Jivan told me while hiding a rebellious smirk from the supervisor who just finished barking at us.

Jivan and I had taken a minute's rest to talk about our lives outside the plant. It was a minute we felt was well earned and certainly due to us. Our line had met our daily quota of 846 components already, yet our only reward was the humiliating scolding from the supervisor and the promise of more backbreaking work at even faster pace. It was near the end of another monotonous and dehumanising day on the assembly line in Silicon Valley.

Jivan had come to the US a little under a year ago from Kerala where he ran a metal shop making machinery parts like bolts and screws. Just as my parents did over 30 years ago, he had come to America for the educational opportunities of his children. Jivan says that he plans on returning to India after his two boys finish school, just as my parents promised themselves when they first came from India. In the highly volatile and unstable labour market of what is being touted as the new economy, Jivan has found himself trying to stay afloat and provide for his family by entering into the only work which has remained consistent to the Valley for the past twenty years: low wage electronics assembly. In the Valley, low wage assembly and manufacturing has been the unstated anchor of technological and economic growth, perhaps explaining its rather hushed existence. It is a labour niche, which has been created and reserved for immigrant workers of colour. It is a niche which sits at the bottom of the rung, a place where others would not and do not go for work. Although it is gruelling work physically, mentally, and emotionally, it offers sub-liveable compensation to its hidden workforce. The work is ironically the base of one of the most prolific profit

generating industries in modern times and is located in one of the world's most powerful financial hubs.

A profound characteristic popular psyche has accepted about the Information Age is the presumption that technology is produced by some sort of divine intervention so advanced that it requires no actual assembly or manufacturing, the very same features our predecessors in the Industrial Era found so essential. Yet every computer, printer, and technological wizardry in-between bought at the local Radio Shack is birthed in what is usually a very inglorious assembly line production site. Electronics production requires so much labour that the high-tech industry employs one out of every five wage earners in the Valley (Economic Development Department). For the over 200,000 people labouring in the manufacturing sector, 70% of whom are Asian (*San Jose Mercury* April 16, 1999), working conditions do not match up to the industries' public image. Contrary to the charismatic Intel commercials displaying workers in fabrication labs dancing around in choreographed bliss, the real work environment in anything but a party. Fabrication labs and other high-tech production sites have proven to be dangerous, abusive, and shockingly never seem to play danceable 70's disco. In actuality, modern high-tech industry is riddled with some of the most archaic expressions of naked exploitation. Electronics manufacturing plants and their ill-fated surrounding low-income neighbourhoods are saturated with carcinogens, acids, and highly toxic gases. (Hawes, *Workplace Hazards for High-tech Workers*, 1996) Toxicology studies have shown that the chemicals in common industrial use have damaging effects on the brain and the immune, endocrine and central nervous systems. These studies report findings for less than two percent of the 80,000 industrial chemicals that have been comprehensively tested for potential long-term effects on human beings. (Hironaka/Cuadros, *Environmental Justice Starts in the Workplace*, 1996) For all practical purposes, workers on the line are the laboratory animals being experimented upon to determine the synergistic results of combining these unknown chemicals. The by-product has been industrial occupational illness rates three times that of general manufacturing. (Eisenscher, *Silicon Fist in a Velvet Glove*, 1993)

Although exploitation of the immigrant experience is nothing new to California or the Silicon Valley, its cancerous growth as a defining feature of the industry's economic 'success' has never been more obvious to its growing low-wage contingent workforce. Once known as the 'Valley of Heart's Delight' for being the most productive orchard crop region in the United States, Silicon Valley high-tech manufacturing is rooted in a practice of using immigrant working communities as fodder to feed its uncompromising demand for cheap disposable labour. First there were the Mexican Americans who once picked fruit in the fields of the Valley. Now the electronics industry manages to meet its ever increasing number of production orders by filling its chemically intensive semiconductor fabrication rooms and assembly lines with an array of hard working communities of colour. Call it the industry's interpretation of affirmative action. Not surprisingly, the view of the unintentionally diverse blue-collar workforce is lost from the safe distance of management's window. From that seat of power, it's just a blur of slightly varying shades of brown skin. Brown hands working with an unusual anxiety and endurance for 8 to 12 hours a day. It is as permanent a fixture to the factory image as the white walls and greying ceilings. A closer inspection

unveils a worker demographic composite that naturally mirrors the immigration history of the area. Vietnamese, Filipino, Korean, and Ethiopian women and men of all ages have joined the Latino working community to create a globally represented workforce in the very centralized geographic region of Silicon Valley. For high-tech tycoons of the new economy, it is a set-up that offers all the advantages of low-cost third world labour with the convenience and luxury of the United States. As a result of current immigration flows, high-tech sweatshops have been supplemented in the recent years with the presence of a new addition: the South Asian worker.

The twist of fate for the thousands of South Asians on the line is that the treatment which Jivan said workers would never stand for in India is being forced upon them in the U.S. because of their immigrant standing. Being an immigrant employed in high-tech manufacturing now means that you are classified as a 'low-wage temporary worker'. In Silicon Valley this identity means that you make \$6.00 to \$8.00 an hour in one of the most unaffordable places to live in the country, have no job security, and no health insurance in an extremely hazardous work environment. Many temporary workers start a job thinking of the workplace abuses as the burdens of a transitional reality, something to put up with for now, but will soon end once a better job is found. Due to the lack of the paradoxical 'good assembly jobs', many temporary workers become stuck at the same plant, at the same position and pay for years - a punishing extended sentence which slowly eats away at morale and hope. Thus temporary work becomes permanent in all the worst ways and none of the good ways.

The rocket like ascendance of a portion of South Asian engineers and business people into Silicon Valley royalty has been both a captivating and surprising tale of immigrant entrepreneurial stewardship. Captivating for the phenomenal amount of wealth - \$16.8 billion in sales when combined with the Chinese - and surprising because most of these South Asians have come over in just the past two decades (Mendoza/Associated Press, *Immigrants Find Success in Silicon*, July 2 1999). The fact that there are over 20 publicly traded companies each with sales in the millions founded or run by Indians in Silicon Valley seems to have given tangible evidence to the 'model minority' paradigm. Of course such myths are allowed to perpetuate if the reality of the rest of the South Asian American existence is given a blind eye, thus also avoiding the exposure of an embarrassingly two-faced relationship of opportunity and exploitation with high-tech industry.

While our community and the mainstream media has recognized the increasing number of South Asian engineers at the top of the computer field of Silicon Valley, the acknowledgement of thousands of South Asian workers at the bottom of the high-tech food chain has been suspiciously absent. Surely denying the existence of an entire sector of a community is an unhealthy practice unto itself, but if maintained at this rate it has the potential of danger well beyond the seemingly neutral intention of indifference. In short, given the 'third world' reality which South Asian immigrants face on a daily basis in Silicon Valley shop floors, the position of our community must mature into an active ally of the broader immigrant labour movement if any change is to be expected. The issue of community intervention becomes even more pressing given the anti-union history of the Valley. While most industries of such size have union representation to rely upon as a voice for workers rights,

Silicon Valley has put tremendous energy and resources into keeping the industry 'union-free'. Having the foresight to see how a union could disrupt the patently unfair labour practices of his industry, Bob Noyce (the co-founder of Intel) claimed in his 1984 book entitled *Silicon Valley Fever* that, "Remaining non-union is essential for survival for most of our companies. If we had work rules that unionised companies have, we'd all go out of business. This is a very high priority for management". The industry obeyed this commandment religiously throughout the booming business expansions of the past two decades by implementing rapid union busting campaigns to diffuse any energy that hinted of worker organizing. Without union protection or a community support network, a worker such as Jivan is left in a battle for workplace justice that pits him alone against an entire industrial complex fully stocked with money, political clout, and ludicrously effective media campaigns. The romantic struggle of the under-dog loses its charm when one notes that these unfair odds directly result from his and our community's absence.

The fact of the rising number of South Asians in the manufacturing sector of Silicon Valley must serve to animate the collective South Asian American consciousness. We must focus on our well being in the workplace because we are being focused upon. Particular energy must be concentrated on dissolving the separations between labour and community organizing.

They are manifestations of the same struggle. This becomes even more apparent when industries, such as those in Silicon Valley, target and sacrifice specific ethnic groups to maintain astronomical and unshared fortunes. Describing the status of management/labour relations at his company, a co-worker of Jivan said, "They (management) think we're mushrooms. They keep us in the dark and feed us shit". Illuminating and exposing the dark corners of Silicon Valley is needed to foster a unified critical awareness among workers, labour groups, and the community. It is a vital step in a protracted struggle to bring justice in high-tech Silicon Valley.

----- Forwarded message -----

Date: Thu, 22 May 97 8:12:59 EDT
 From: Albert Jesupaul <jesupaul@unix.systems.gec.com>
 Subject: Bodyshopping - A story !

> >>Long story, But interesting.... (Source : A friend)

A quite interesting/realistic depiction of the life of a consultant in US, in contrast to the popular concepts/beliefs back in India

This article describes the fate of Indians who come to America, thinking that they could make a fortune and finally end up making one for others and get exploited for their sake. By Indians, I mean software (s/w) professionals who were in a good position in India and who fall victim to the so called Body Shoppers.

Software is a booming market. Entrepreneurs in India start software companies with just a few PCs and then earn thousands by using the talent of so many graduates from any discipline who take up this profession as it is easily available. I have worked with a software wizard who was basically a B.S. in Zoology! Many choose s/w to come to America, now that the door of MS is closing rapidly and also it is prohibitively expensive (with the recent Dollar Rupee conversion hike). Further, it is a long process GRE, TOEFL, admission fee, reference letters, visa, flight fare, working in McDonald, doing other odd part time jobs, staying in dungeons without heat and hot water facility. After all this, attempts to find work usually result in working for a s/w consultancy and doing Financial Accounting. They would have been done much better if they had followed our Zoology hero!

About a decade ago only students from IIT and top Colleges like College of Engineering, Guindy, and RECs, and who had gone through rigorous study in the main branches of Engg could imagine setting foot in this country. But even they had to study for an MS or Ph.D here before they could get a job. They had to start their life in America with a bank balance of at least \$10,000/- because of the expensive courses they had to take.

Thanks to the s/w boom and the tendency of American companies not to hire people permanently, the contracting business burgeoned and spawned numerous companies whose business was to bring people from India, put them in various corners of the U.S., and shift them wherever and whenever there is a client. The Indians who come here are like a commodity, and lead a gypsy life, but one thing they know better than the U.S. President - they can rattle off the area code of most states, even when woken up from sleep, because they have lived there for at least 2 months. For Indians the life here is better indeed as they can save more from the converted currency. But everything depends on which contracting firm they join.

Most contracting companies (hereafter called Company) are parasites, or pimps. The best word is actually BodyShoppers. There is no symbiosis involved.

The system works like this: They bring in the professionals on an H1 work permit (now reduced to just 1 year from 5 years). They put them at the client site, charge the client about \$8000/- per month but pay their poor employee half as much (including all benefits). Thus the Company gets \$4000 per month, per employee. Imagine if they have 50 employees. It is easy to get such s/w professionals as their availability across the globe is 5 lakhs or more.

The worst part is that these companies are owned by idiots who barely know how to spell software. For them Oracle, Sybase, SQL, HTML, C, C++ all mean the same Dollar. Not only that - Rama, Siva, Madhav, Chetty or Rao, Goel or Vemuri all mean the same Dollar. There is no personal touch only money, money sweeter than honey !! I relate the experience of a typical victim, and we can't give him a better name than Mr. Oracle Rao.

When Oracle Rao arrives in America he is at first very excited. A GuestHouse (GH) in-charge comes and picks him up at the airport to drive him at a speed of 120 kmph and take him to the guest house that most companies keep. Rao thinks he is in paradise. It is like the spider's web waiting to trap the expert in the World Wide Web. Slowly things are revealed to him and he is told that he will be charged for food, stay and transport. A rude shock is he has to go through interviews to get a job which could be anywhere from CA to Maine or Texas. The interviews are over the phone and he may or may not get through. If another Indian is interviewing him, 9 out of 10 cases he will be rejected. Indians are jealous of new competitors. The Company may then subcontract Oracle Rao to some other pimp who then sends him to the client.

For every dollar Rao earns, one is earned by each of the two pimps. Till Rao gets a job he is will be paid a small allowance. This is called the 'BENCH', but it is a loss for Rao since he still has to pay for expenses. But the company is not bothered as it continues to mint money through the other Raos or Reddies who are available in plenty.

The nightmare is that Rao gets the bill from the GH in-charge even before he gets a paycheck! And even the paltry allowance he gets is multiplied by 35 and he is told "You are paid one lakh rupees for doing nothing". Rao does not dare to retort, "But I am paying back Rs. 75000/- by way of rent, food and transport!"

Typically the GH houses about 3 to 4 victims, and each of them pay about \$500 per month for their room rent. Also they have to pay about \$15 per day for food and about \$3 for transport. Since the gypsies don't have a driving license, they are like a bird without wings and are exploited to the fullest extent. They have to depend on the Company for everything and pay exorbitantly for even basic amenities. Most GH occupants are on the 'bench'. The GH is conveniently located about 3 miles from a shopping center, so that the birds can't even walk there and are bound for transport to the GH in-charge.

I should describe the food in detail. Only breakfast and dinner are provided for \$15/- While breakfast is just bread and eggs, dinner is mostly potatoes and egg curry or some cheap vegetable like beans. Groceries are bought from wholesale clubs like BJ's at unbelievable prices. You could not buy a loaf of bread for 50 cents anywhere in the U.S. except at these places. Although Indian pickles are served with the meal, I was shocked to find one day that those pickles had expired 6 months ago. The food is definitely is not worth \$15 - hardly \$5 - but Rao does not realize this at the beginning since he would not have drunk

juice or seen a microwave yet. The worst time is between projects. A project can be closed for various reasons. Lack of funds, availability of other Indians at a cheaper price - or due to change of s/w platforms. Sometime the Company itself will be responsible by pushing another employee (victim) to make more money. But for all that, Rao is the one blamed, and he is told that the project is over because he did not do well. Till he gets the next project he may or may not be paid. Rao is on his toes. Since he has to pay the rent, phone bill etc., he has signed a lease, got a car, registered for some extra-curricular activities. Imagine if he had a family with a school-going child. Before his child would have adjusted to the new school, he would have been shifted to another state. School admissions although easy have indirect costs like paying for medical, dental and psychological checkups which are mandatory before admission. Rao pays for all these.

Not only all this, he will also have to buy technical books to update his knowledge for daily work. When he asks for reimbursement it is turned down saying that only if the client demands will these be paid for. Clients are not bothered because even if Rao is not there some other Chetty will be. Rao is fed up and buys them at his own expense. The Company will take the profit accruing from his knowledge, but he has to pay himself for getting it. The expense list is unending - Rao has to pay for gas, auto insurance, car depreciation, furniture etc. When the project ends he may have to shift to another state and the lease has to be broken. When he asks his company to pay for lease breakage they coolly tell him "We don't normally get involved in leases". Rao thinks, "what nonsense! Are you guys involved only in profits?"

Frustrated, he tries to join the Client itself. Americans are much better than Desis. But even that is prevented by the Company - who threatens him with a law suit, and the client is asked to pay a huge amount (about \$10,000/-) as finder's fee.

In short, when he tries to go his own way to feed himself, he is prevented. Is he a slave? What happened to basic human rights in this country? Is it not worse than the slavery of Indians under the British for which Gandhiji sacrificed his life. Rao is allowed neither to live nor to die.

The Client is obviously unwilling to pay the 10,000. Furthermore, it realises that it can no longer continue to pay \$8000 per month. The client prefers to hire someone local, or with a green card. Hence, good bye to Rao. Once again Rao has to be on the 'bench'. In case Rao joins the client by paying the finder's fee, he is as good as dead for the Company.

Rao's trials continues... In case he has asked the company to process his Green Card (for the lack of which he has to suffer like chicken on barbecue fire) and yet wants to leave the Company, it will recover from him the \$4000 cost, in addition to the \$2000 for leaving within a year of joining.

This brings to my mind an old Tamil proverb. An elephant while alive and even after death earns thousands for its mahout. But at least the mahout takes care of the elephant. Finally the company gets about 1 lakh for doing nothing even when the victim leaves.

NOTE

When I received this story from a friend, I wondered how far this is true. There are exceptions to these type of companies, but they're very few. I experienced such companies in my past and so I couldn't deny this in total.

<<<entry permitted/access denied>>>

Ami is a techie, who loves programing and 3d computer games, but her mom is more worried about Ami's eyesight. "Don't sit on the computer Ami", she says, "there are things to be done!" Ami's mom can't be blamed. We can be proud of Miss Universe because she is doing girl things. But when it comes to software talk, people say - 'this is not women's business'.

It all begins when we are kids. When parents buy a new computer, it usually goes into the boy's room. Or, take something as simple as computer games, which introduce children to the basic technology of computers. Kids who play these games have an advantage over kids who don't. Currently, the majority of computer-game players are boys. I think that this is due to the types of games on the market; most of them appeal to boys rather than to girls. They depict violence, emphasize competition, and demand strong hand-eye coordination. I have come across very few games that require practical, or real world problem solving capacities (not military strategy!). They fit in with the way boys tend to be socialized. It's a vicious circle - computer games are mostly made keeping young boys in mind and this gender bias of the games industry contributes to girls' lack of interest in computers.

It's the same story in school. "All right, everyone! You will need to share a computer", says the teacher. The boys don't move; they have already begun to manipulate the software and play games. This is a classic junior school computer class scene. Instead of encouraging girls to use technology, teachers sometimes turn us off, both subtly and forcibly. Often, teachers will ask only the boys the 'technical questions', and mock girls' ignorance of techspeak.

If a girls feels that something is wrong with a machine or a programme, she is often told 'you wouldn't know', or, 'don't bother, they (the boys) will fix it'. I have heard this said very often in class when a group of boys were trying to debug code and a girl tried to join in.

One thing that girls do like is Internet chat. For many girls, chat rooms become the gateway to more challenging online exploration. They apply the technology to the kinds of interests they have off the computer. They form clubs and communities instead of just competing all the time.

It's not that girls are not encouraged to take up 'techie' courses or jobs. We are expected to be well-trained, but not too ambitious, or creative with technology. We are socialized to view technology and technically-literate people as belonging to the male world of 'Geekdom'. Its not as if we are told, 'you cant reach this far if you are a woman' but we are constantly reminded about how extremely unlikely this is. 'Tech stuff is difficult for boys. Maybe... but it is even more difficult for girls!'

But the reality, I feel, is that this is not a 'biology' issue at all. It's just the way we are made to grow up. That is why there are, for instance, few women hackers in India. Not because girls can't hack. Why can't a girl hacker be accepted as something natural?

After all, people on either side of the gender divide have ten fingers each, and a brain to think with. To be a techie you just have to be a particular kind of person. Gender need not be an issue.

Hopefully, it will be possible for us not to make a 'big deal' out of women doing well in the technical arena or to be surprised by it. Someday?

Ruchika Agarwal

'Free as in Freedom': Software as Culture



Why Software Should Not Have Owners

RICHARD STALLMAN

Digital information technology
contributes to the world by making
it easier to copy and modify information.

Computers promise to make this easier for all of us.

Not everyone wants it to be easier. The system of copyright gives software programs “owners”, most of whom aim to withhold software's potential benefit from the rest of the public. They would like to be the only ones who can copy and modify the software that we use.

The copyright system grew up with printing - a technology for mass production copying. Copyright fit in well with this technology because it restricted only the mass producers of copies. It did not take freedom away from readers of books. An ordinary reader, who did not own a printing press, could copy books only with pen and ink, and few readers were sued for that.

Digital technology is more flexible than the printing press: when information has digital form, you can easily copy it to share it with others. This very flexibility makes a bad fit with a system like copyright. That's the reason for the increasingly nasty and draconian measures now used to enforce software copyright. Consider these four practices of the Software Publishers Association (SPA):

- >>> Massive propaganda saying it is wrong to disobey the owners to help your friend.
- >>> Solicitation for stool pigeons to inform on their coworkers and colleagues.
- >>> Raids (with police help) on offices and schools, in which people are told they must prove they are innocent of illegal copying.
- >>> Prosecution (by the US government, at the SPA's request) of people such as MIT's David LaMacchia, not for copying software (he is not accused of copying any), but merely for leaving copying facilities unguarded and failing to censor their use.

All four practices resemble those used in the former Soviet Union, where every copying machine had a guard to prevent forbidden copying, and where individuals had to copy information secretly and pass it from hand to hand as "samizdat". There is of course a difference:

The motive for information control in the Soviet Union was political; in the US the motive is profit. But it is the actions that affect us, not the motive. Any attempt to block the sharing of information, no matter why, leads to the same methods and the same harshness.

Owners make several kinds of arguments for giving them the power to control how we use information:

>>> NAME CALLING

Owners use smear words such as "piracy" and "theft", as well as expert terminology such as "intellectual property" and "damage", to suggest a certain line of thinking to the public - a simplistic analogy between programs and physical objects.

Our ideas and intuitions about property for material objects are about whether it is right to take an object away from someone else. They don't directly apply to making a copy of something. But the owners ask us to apply them anyway.

>>> EXAGGERATION

Owners say that they suffer "harm" or "economic loss" when users copy programs themselves. But the copying has no direct effect on the owner, and it harms no one. The owner can lose only if the person who made the copy would otherwise have paid for one from the owner.

A little thought shows that most such people would not have bought copies. Yet the owners compute their "losses" as if each and every one would have bought a copy. That is exaggeration - to put it kindly.

>>> THE LAW

Owners often describe the current state of the law, and the harsh penalties they can threaten us with. Implicit in this approach is the suggestion that today's law reflects an unquestionable view of morality - yet at the same time, we are urged to regard these penalties as facts of nature that can't be blamed on anyone. This line of persuasion isn't designed to stand up to critical thinking; it's intended to reinforce a habitual mental pathway.

It's elementary that laws don't decide right and wrong. Every American should know that, forty years ago, it was against the law in many states for a black person to sit in the

front of a bus; but only racists would say sitting there was wrong.

>>> NATURAL RIGHTS

Authors often claim a special connection with programs they have written, and go on to assert that, as a result, their desires and interests concerning the program simply outweigh those of anyone else – or even those of the whole rest of the world. (Typically companies, not authors, hold the copyrights on software, but we are expected to ignore this discrepancy.)

To those who propose this as an ethical axiom – the author is more important than you – I can only say that I, a notable software author myself, call it bunk. But people in general are only likely to feel any sympathy with the natural rights claims for two reasons. One reason is an overstretched analogy with material objects. When I cook spaghetti, I do object if someone else eats it, because then I cannot eat it. His action hurts me exactly as much as it benefits him; only one of us can eat the spaghetti, so the question is, which? The smallest distinction between us is enough to tip the ethical balance. But whether you run or change a program I wrote affects you directly and me only indirectly. Whether you give a copy to your friend affects you and your friend much more than it affects me. I shouldn't have the power to tell you not to do these things. No one should. The second reason is that people have been told that natural rights for authors is the accepted and unquestioned tradition of our society.

As a matter of history, the opposite is true. The idea of natural rights of authors was proposed and decisively rejected when the US Constitution was drawn up. That's why the Constitution only permits a system of copyright and does not require one; that's why it says that copyright must be temporary. It also states that the purpose of copyright is to promote progress – not to reward authors. Copyright does reward authors somewhat, and publishers more, but that is intended as a means of modifying their behavior. The real established tradition of our society is that copyright cuts into the natural rights of the public – and that this can only be justified for the public's sake.

>>> ECONOMICS

The final argument made for having owners of software is that this leads to production of more software. Unlike the others, this argument at least takes a legitimate approach to the subject. It is based on a valid goal – satisfying the users of software. And it is empirically clear that people will produce more of something if they are well paid for doing so. But the economic argument has a flaw: it is based on the assumption that the difference is only a matter of how much money we have to pay. It assumes that "production of software" is what we want, whether the software has owners or not. People readily accept this assumption because it accords with our experiences with material objects. Consider a sandwich, for instance. You might well be able to get an equivalent sandwich either free or for a price. If so, the amount you pay is the only difference. Whether or not you have to buy it, the sandwich has the same taste, the same nutritional value, and in either case you can only eat it once. Whether you get the sandwich from an owner or not cannot directly affect anything but the amount of money you have afterwards. This is true for any kind of material object

– whether or not it has an owner does not directly affect what it is, or what you can do with it if you acquire it.

But if a program has an owner, this very much affects what it is, and what you can do with a copy if you buy one. The difference is not just a matter of money. The system of owners of software encourages software owners to produce something – but not what society really needs. And it causes intangible ethical pollution that affects us all.

What does society need? It needs information that is truly available to its citizens – for example, programs that people can read, fix, adapt, and improve, not just operate. But what software owners typically deliver is a black box that we can't study or change.

Society also needs freedom. When a program has an owner, the users lose freedom to control part of their own lives. And, above all, society needs to encourage the spirit of voluntary cooperation in its citizens. When software owners tell us that helping our neighbors in a natural way is 'piracy', they pollute our society's civic spirit. This is why we say that free software is a matter of freedom, not price.

The economic argument for owners is erroneous, but the economic issue is real. Some people write useful software for the pleasure of writing it or for admiration and love; but if we want more software than those people write, we need to raise funds. For ten years now, free software developers have tried various methods of finding funds, with some success. There's no need to make anyone rich; the median US family income, around \$35k, proves to be enough incentive for many jobs that are less satisfying than programming.

For years, until a fellowship made it unnecessary, I made a living from custom enhancements of the free software I had written. Each enhancement was added to the standard released version and thus eventually became available to the general public. Clients paid me so that I would work on the enhancements they wanted, rather than on the features I would otherwise have considered highest priority.

The Free Software Foundation (FSF), a tax-exempt charity for free software development, raises funds by selling GNU CD-ROMs, T-shirts, manuals, and deluxe distributions, (all of which users are free to copy and change), as well as from donations. It now has a staff of five programmers, plus three employees who handle mail orders. Some free software developers make money by selling support services. Cygnus Support, with around 50 employees [when this article was written], estimates that about 15 per cent of its staff acti-



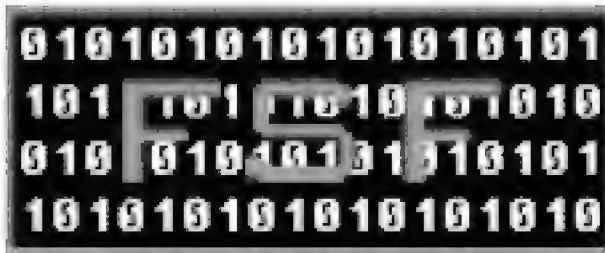
vity is free software development - a respectable percentage for a software company. Companies including Intel, Motorola, Texas Instruments and Analog Devices have combined to fund the continued development of the free GNU compiler for the language C. Meanwhile, the GNU compiler for the Ada language is being funded by the US Air Force, which believes this is the most cost-effective way to get a high quality compiler. [Air Force funding ended some time ago; the GNU Ada Compiler is now in service, and its maintenance is funded commercially.]

All these examples are small; the free software movement is still small, and still young. But the example of listener-supported radio in this country [the US] shows it's possible to support a large activity without forcing each user to pay.

As a computer user today, you may find yourself using a proprietary program. If your friend asks to make a copy, it would be wrong to refuse. Cooperation is more important than copyright. But underground, closet cooperation does not make for a good society. A person should aspire to live an upright life openly with pride, and this means saying "No" to proprietary software.

You deserve to be able to cooperate openly and freely with other people who use software. You deserve to be able to learn how the software works, and to teach your students with it. You deserve to be able to hire your favorite programmer to fix it when it breaks.

You deserve free software.



What Is Copyleft?

The simplest way to make a program free is to put it in the public domain, uncopyrighted. This allows people to share the program and their improvements, if they are so minded. But it also allows uncooperative people to convert the program into proprietary software. They can make changes, many or few, and distribute the result as a proprietary product. People who receive the program in that modified form do not have the freedom that the original author gave them; the middleman has stripped it away.

In the GNU project, our aim is to give all users the freedom to redistribute and change GNU software. If middlemen could strip off the freedom, we might have many users, but those users would not have freedom. So, instead of putting GNU software in the public domain, we 'copyleft' it. Copyleft says that anyone who redistributes the software, with or without changes, must pass along the freedom to further copy and change it. Copyleft guarantees that every user has freedom.

Copyleft also provides an incentive for other programmers to add to free software. Important free programs such as the GNU C++ compiler exist only because of this.

Copyleft also helps programmers who want to contribute improvements to free software get permission to do that. These programmers often work for companies or universities that would do almost anything to get more money. A programmer may want to contribute her changes to the community, but her employer may want to turn the changes into a proprietary software product.

When we explain to the employer that it is illegal to distribute the improved version except as free software, the employer usually decides to release it as free software rather than throw it away.

To copyleft a program, first we copyright it; then we add distribution terms, which are a legal instrument that gives everyone the rights to use, modify, and redistribute the program's code or any program derived from it but only if the distribution terms are unchanged. Thus, the code and the freedoms become legally inseparable.

Proprietary software developers use copyright to take away the users' freedom; we use copyright to guarantee their freedom. That's why we reverse the name, changing 'copyright' into 'copyleft'.

Copyleft is a general concept; there are many ways to fill in the details. In the GNU Project, the specific distribution terms that we use are contained in the GNU General Public License (available in HTML, text, and Texinfo format). The GNU General Public License is often called the GNU GPL for short.

Some Confusing / Loaded Words + Phrases

(that are worth avoiding)

There are a number of words and phrases which we recommend avoiding, either because they are ambiguous or because they imply an opinion that we hope you may not entirely agree with.

'For free'

If you want to say that a program is free software, please don't say that it is available 'for free'. That term specifically means 'for zero price'. Free software is a matter of freedom, not price.

Free software copies are often available for free - for example, by downloading via FTP. But free software copies are also available for a price on CD-ROMs; meanwhile, proprietary software copies are occasionally available for free in promotions, and some proprietary packages are normally available at no charge to certain users.

To avoid confusion, you can say that the program is available "as free software."

'Freeware'

Please don't use the term 'freeware' as a synonym for 'free software'. The term 'freeware' was used often in the 1980s for programs released only as executables, with source code not available.

Today it has no particular agreed-on definition.

Also, if you use other languages than English, please try to avoid borrowing English words such as 'free software' or 'freeware'. Try to use the often less ambiguous wording that your language offers, e.g. (Hindi: mukt software)

- > Hebrew: tochna hofshit
- > French: logiciel libre
- > German: freie software
- > Russian: svobodny programy
- > Chinese: ziyou ruanjian
- > Japanese: jiyuu [na] sofuto
- > Esperanto: libera programaro
- > Swedish: fri programvara
- > Dutch: vrije software

By forming a word in your own language, you show that you are really referring to freedom and not just parroting some mysterious foreign marketing concept. The reference to freedom may at first seem strange or disturbing to your countrymen, but they will get used to it soon and thereby find out about the real message behind free software.

Give away software

It's misleading to use the term 'give away' to mean, 'distribute a program as free software'. It has the same problem as 'for free': it implies the issue is price, not freedom. One way to avoid the confusion is to say, 'Release as free software'.

'Intellectual property'

Publishers and lawyers like to describe copyright as 'intellectual property'. This term carries a hidden assumption - that the most natural way to think about the issue of copying is based on an analogy with physical objects, and our ideas of them as property.

But this analogy overlooks the crucial difference between material objects and information: information can be copied and shared almost effortlessly, while material objects can't be. Basing your thinking on this analogy is tantamount to ignoring that difference.

Even the US legal system does not entirely accept this analogy, since it does not treat copyrights just like physical object property rights.

If you don't want to limit yourself to this way of thinking, it is best to avoid using the term 'intellectual property' in your words and thoughts.

Another problem with 'intellectual property' is that it is an attempt to generalize about several legal systems, including copyright, patents, and trademarks, which are much more different than similar. Unless you have studied these areas of law and you know the differences, lumping them together will surely lead you to incorrect generalizations.

To avoid confusion, it is best not to look for alternative way of saying 'intellectual property'. Instead, talk about copyright, patents, or whichever specific legal system is the issue.

'Piracy'

Publishers often refer to prohibited copying as 'piracy'. In this way, they imply that illegal copying is ethically equivalent to attacking ships on the high seas, kidnapping and murdering the people on them.

If you don't believe that illegal copying is just like kidnapping and murder, you might prefer not to use the word 'piracy' to describe it. Neutral terms such as 'prohibited copying' or 'unauthorised copying' are available for use instead. Some of us might even prefer to use a positive term such as 'sharing information with your neighbour'.

'Protection'

Publishers' lawyers love to use the term 'protection' to describe copyright. This word carries the implication of preventing destruction or suffering; therefore, it encourages people to identify with the owner and publisher who benefit from copyright, rather than with the users who are restricted by it.

It is easy to avoid 'protection' and use neutral terms instead. For example, instead of

'Copyright protection lasts a very long time', you can say, 'Copyright lasts a very long time'. If you want to criticize copyright instead of supporting it, you can use the term "copyright restrictions."

'Sell software'

The term 'sell software' is ambiguous. Strictly speaking, exchanging a copy of a free program for a sum of money is 'selling'; but people usually associate the term 'sell' with proprietary restrictions on the subsequent use of the software. You can be more precise, and prevent confusion, by saying either 'distributing copies of a program for a fee' or 'imposing proprietary restrictions on the use of a program', depending on what you mean.

See *Selling Free Software* for more discussion of this issue.

'Theft'

Copyright apologists often use words like 'stolen' and 'theft' to describe copyright infringement. At the same time, they ask us to treat the legal system as an authority on ethics: if copying is forbidden, it must be wrong. So it is pertinent to mention that the legal system - at least in the US - rejects the idea that copyright infringement is 'theft'.

Copyright advocates who use terms like 'stolen' are misrepresenting the authority that they appeal to. The idea that laws decide what is right or wrong is mistaken in general. Laws are, at their best, an attempt to achieve justice; to say that laws define justice or ethical conduct is turning things upside down.

Piracy is Your Friend

JARON LANIER

Piracy is a phony issue that record labels are hyping to rip off artists. Piracy has always existed. That's why there's a mountain of blank cassettes in any big electronic store.

When someone decides to buy your music instead of copying it, they're doing it for a lot of reasons. Maybe they're ethical. Maybe they like the convenience of not having to hassle with the uncertainty of copying something - Will it come out right? Is it done yet? Maybe it's their way of expressing good-will to you.

But face it, if your music wasn't available for free in some form, no one would have a chance to hear it to decide to buy it in the first place. The old form of 'free' music was radio (which is often taped by pirates) and MTV, but eventually the Internet is going to take over everything. There will still be TV and radio, but they'll be implemented digitally. Give it 10 years. When that happens, the idea of not giving away music for free will be exactly the same thing as never promoting music at all.

The real question should not be, "How can I keep my fans from hearing my music for free?" It should be, "How can I best make money from my fans?" Those are two different questions. Sure, you 'lose' money to pirates. But you also lose money to a label that isn't doing anything for you.

It used to be that a label was needed to finance, manufacture, store, ship and market your music. That's how they earned their cut. The arrangement made sense. If the music business wasn't shrinking before our eyes, it would still make sense.

But in the digital era, it costs nothing to ship your music over the Internet to a fan. So the biggest reason for labels just went away.

As for financing, well, if advances were stacked up against finance deals in other industries, they'd look a lot like usury - except that they aren't even loans: once they're paid back, the label still owns the master. There is simply no worse conceivable form of financing. We can do better if we take charge of our own careers.

But what about marketing? Can labels still do that? Of course they can, for a few big acts. But once you are established, your own Web site connects with your fan base better than the label can.

Even if you are a huge artist, think whether in the course of your whole career, not just the next couple of years, you lose more money to pirates or to labels who will be taking most of your money for no reason at all?

When somebody in a dorm room buys thousands of dollars' worth of gear and stays up all night hacking MP3s just to get 'free' music, that's what you call an opportunity, not a problem. You have found yourself a new generation of fanatics. The only problem is that computer companies are making the money right now instead of musicians.

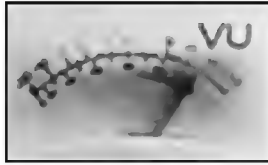
Labels can't prevent piracy. No one can. I know computers as well as anyone on the planet, and I promise you, kids will break whatever copy protection scheme the labels come up with. And the industry knows it.

In fact, the easier it is to copy music, the less of a threat piracy will become. When piracy gets easier, professional pirates have less to offer. The only pirates left will be fans. And there are lots of ways to make money from fans.

The reason the Recording Industry Association of America and the labels are pushing anti-piracy laws and technologies, has nothing to do with preventing piracy. They're doing it so that they can control the new digital music channels. To keep anyone else, like you, from sharing the power.

They're doing it to rip you off. Period.

You can make more money in the new era of 'free' digital music. But only if you break free of label mind control.



www.freeradio.org

Welcome to Free Radio Berkeley. Founded on April 11, 1993 as a Free Speech voice challenging the regulatory structure and power of the Federal Communications Commission (FCC), Free Radio Berkeley is engaged in ongoing legal battle with the FCC. Until it was silenced by a court injunction in June 1998, Free Radio Berkeley was broadcasting 24 hours a day, 7 days a week at 104.1 FM with 50 watts of power as the alternative voice for the greater Berkeley/Oakland area. The original Free Speech mission to provide community news, discussions and interviews, information, a wide range of music, and more has now been taken up by Berkeley Liberation Radio (www.berkeleyonline.net) while Free Radio Berkeley awaits the outcome of legal motions before the 9th Circuit Court of Appeals. Free Radio Berkeley was instrumental in helping to create an ever growing micropower broadcasting movement to liberate the airwaves and break the corporate broadcast media's stranglehold on the free flow of news, information, ideas, cultural and artistic creativity. This movement has created an ungovernable situation for the FCC which is now exercising damage control by proposing some sort of low power FM service. Our response to this is being represented by the National Lawyers Guild Committee on Democratic Communications.

Following the example of Free Radio Berkeley, hundreds of micropower broadcast stations have taken to the air across the United States and in other countries as well. Current FCC regulations mandate a minimum broadcast power of 100 watts and require such a high cost of entry so that only the rich and well endowed can have a voice. Micropower broadcasting is helping to restore grassroots democracy, bringing back the concept of open and free civic discourse among all citizens. Further, it is a direct challenge to a broadcast system based entirely on wealth. As opposed to the hundreds of thousand dollars required under the current FCC structure to even think about starting an FM broadcast station, a micropower FM broadcast station can be put on the air for a cost ranging from \$1000 - \$2000. An affordable amount for any community desiring to have a voice.

Free Radio Berkeley has two somewhat distinct entities - Free Radio Berkeley 104.1 FM, a silenced broadcast station that was operating with 100 volunteer programmers, and - Free Radio Berkeley IRATE (International Radio Action Training, Education), which provides transmitter kits, technical support and training and is involved in national and international outreach and organizing efforts.

On this site you will find information on Free Radio Berkeley including our current programming schedule and current legal status. Our web storefront is also available offering the latest in micropower broadcasting kits, accessories, complete station packages, audio equipment and antennas. Also check out the Micropower Broadcasting section containing information and links to help you start your own community micropower radio station.

INTERVIEW

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~ **RICHARD STALLMAN:** ... In 1971 when I joined the staff of the MIT Artificial Intelligence lab, all of us who helped develop the operating system software, we called ourselves hackers. We were not breaking any laws, at least not in doing the hacking we were paid to do. We were developing software and we were having fun. Hacking refers to the spirit of fun in which we were developing software. The hacker ethic refers to the feelings of right and wrong, to the ethical ideas this community of people had –that knowledge should be shared with other people who can benefit from it, and that important resources should be utilized rather than wasted. Back in those days computers were quite scarce, and one thing about our computer was it would execute about a third-of-a-million instructions every second, and it would do so whether there was any need to do so or not. If no one used these instructions, they would be wasted. So to have an administrator say, “well you people can use a computer and all the rest of you can’t”, means that if none of those officially authorized people wanted to use the machine that second, it would go to waste. For many hours every morning it would mostly go to waste. So we decided that was a shame. Anyone should be able to use it who could make use of it, rather than just throwing it away. In general we did not tolerate bureaucratic obstructionism. We felt, “this computer is here, it was bought by the public, it is here to advance human knowledge and do whatever is constructive and useful”. So we felt it was better to let anyone at all use it – to learn about programming, or do any other kind of work other than commercial activity.

> *So what happens in the early 1980s to change that? The arrival of ‘black box’ software?*

~ **RS:** The black box type of software was crucial. People could no longer learn hacking the way I did, by starting to work on



TH

STALLMAN



a real operating system, making real improvements. In fact, in the 1980s I often came across newly graduated computer science majors who had never seen a real program in their lives. They had only seen toy exercises, school exercises, because every real program was a trade secret. They never had the experience of writing features for users to really use, and fixing the bugs that real users came across. The things you need to know to do real work.

> *Is that around when you resigned from the AI lab?*

~ **RS:** Well I resigned from the AI lab, but that's getting ahead of the game. To explain why, now, would make a confusing order of things, so let's talk about that later when I talk about how I went about the GNU project. I saw that the world, the social system that encouraged people to cooperate was being replaced by one in which cooperation was called piracy, and I decided that all I could possibly get by participating in that was money, and that just money was not enough to live for. I had to aim for something more important than that.

> *What was that?*

~ **RS:** Giving people freedom. I was a skilled operating system developer, I had the ability to try at least to change the way things worked. It was clear this was the most important thing I could try to do. By developing another operating system that was free I might or might not advance technology, but I could certainly advance society. I might give people technical abilities and features they didn't have, but certainly, by succeeding to write the operating system, I could give them freedom they didn't have. Giving people freedom and encouraging people to cooperate are the two highest goals of any work we can do.

THE HACKER'S ETHIC

The idea of a 'hacker ethic' is perhaps best formulated in Steven Levy's 1984 book, *Hackers: Heroes of the Computer Revolution*. Levy came up with six tenets:

1

Access to computers - and anything that might teach you something about the way the world works - should be unlimited and total. (Always yield to the Hands-On imperative!)

2

All information should be free.

3

Mistrust authority - promote decentralization.

4

Hackers should be judged by their hacking, not bogus criteria such as degrees, age, race, or position.

5

You can create art and beauty on a computer.

6

Computers can change your life for the better

The Hacker Anti-Defamation League

<http://members.nbci.com/jcenters/HADL.html>

Since the early 80's, the press has used the term 'hacker' to mean a malicious security breaker, someone who likes to break into computer systems for fun. This is not a hacker at all. This is in fact a cracker.

Hackers, rather, are people who like to break out of boundaries and find solutions to problems. Hackers not only exist in the software community, they are musicians, engineers, artists. You can find hackers in almost any field. Here, we discuss mainly the software hacker: a person who enjoys programming and exploring computers.

Hackers are the people who built the Internet. They created Unix. They made the World Wide Web work. Without the work of hackers you wouldn't be viewing this page today, and I wouldn't have written it. The modern world owes a lot to hackers.

As a matter of fact, here are the definitions of hacker and cracker as defined by RFC 1983 (Internet Request for Comments protocol):

> CRACKER

A cracker is an individual who attempts to access computer systems without authorization. These individuals are often malicious, as opposed to hackers, and have many means at their disposal for breaking into a system. See also: hacker, Computer Emergency Response Team, Trojan Horse, virus, worm.

> HACKER

A person who delights in having an intimate understanding of the internal workings of a system, computers and computer networks in particular. The term is often misused in a pejorative context, where 'cracker' would be the correct term.

Free Science Campaign

`freescience@zoo1.su.se`

THIS CAMPAIGN HAS BEEN STARTED ON JUNE 18TH 1998 (.)

> Preamble

When authors of scientific papers submit their manuscripts for publication in scientific journals, they are frequently asked to sign a copyright-transfer agreement to the publishers of the journal. After such a transfer, the authors may retain little freedom to use their own papers. For example, some copyright agreements forbid authors to make their works available on a web page: you might be reading something more interesting than this, now! We feel that such copyright policies greatly reduce the freedom of scientists and researchers to exchange information and ideas. In our view, what is important is making scientific literature fully available to all scientists, free of the restrictions that are imposed today. Who owns the copyrights is a secondary issue (please read our objectives for more information). Why should copyright policies change? The answer is simple: because many of the existing copyright policies deny to scientists the right to freely exchange information about their research, slowing down and hampering the communication process of ideas and results which is at the heart of scientific research. Since nowadays most scientists and researchers type their manuscripts directly on a computer, it is possible to share the manuscript with other scientists immediately through computer networks. Many copyright - transfer agreements are currently an obstacle to this possibility. Scientists are not free to put their manuscripts on their web pages so that everyone can easily access them. Moreover, the creation of public databases that can be accessed by everyone is usually not permitted.

> *The goal of our Campaign is very simply stated.*

We want that the existing copyright-transfer agreements be modified so to grant to everyone the rights to freely distribute the works to which the copyright applies for non-commercial purposes. These rights should include:

Personal pages: the right for authors to make available their manuscripts on their web pages, on their institution's web pages, or on the web pages of any other organisation which does not require fees of any kind to access the manuscripts.

Public databases: the right for people other than the authors to distribute and store the copyrighted works on any media they like, provided they do not alter the original works and do not ask any fees for these services. This allows for the creation of publicly accessible databases which are a powerful tool to promote ideas and research. These databases can also provide valid help to scientists in developing countries, where availability of printed journals may be limited. Please note that all these requests are made solely to promote and facilitate the free exchange of ideas and scientific results. We do not ask that the copyright agreement produce any economical benefits for the authors of scientific papers. This campaign is not concerned with the commercial use of scientific papers, only with non-commercial distribution on the Internet or with other media. We state clearly that all rights of distribution and copy granted to the authors and the community would be restricted to non-commercial use. Journal publishers need not regard this campaign as antagonistic. Some journals and publishers already use copyright agreements that meet the goals of this campaign (e.g. the American Mathematical Society and American Physical Society); other publishers can surely do the same thing. Our aim is to make sure that this happens. For example, a publisher may have an on-line database which is chosen by individuals and Universities because it is better organised than others, or provides some additional services. But it should not be the only possible choice because the publisher 'owns' the papers in the database. Further information on copyright policies is here. To achieve the goal of our Campaign, we take the following initiatives. **Raise attention.** The first and most important thing is to raise the attention of a great number of people. If the entire scientific community agreed at once on not submitting manuscripts to journals which impose too severe restrictions, the matter would be settled in a couple of weeks. You can help us do this! **Speak with publishers.** We are contacting publishers to see to what extent they are willing to change their policy. As stated above, we think that a satisfactory agreement is possible. If you would like to bring these issues to a particular publisher, please contact us so that we can act together. **Promote initiatives** at the institutional level. It would be of great help to have the support of Universities and other Institutions whose employees write scientific papers. These institutions may require that the manuscripts written by their employees be archived on a publicly accessible web server. Also, institutions might forbid their employees to sign agreements that would restrict access to the papers. **Read our page** on how to help us if you want to start such initiatives at your Institution. **Publish papers.** You can publish your papers on your web pages, your institution's ones, or on public databases, if they are available in your field.

The Free Music Philosophy (v1.4)

RAM SAMUDRALA

What is the Free Music Philosophy (FMP)?

It is an anarchistic grass-roots, but high-tech, system of spreading music: the idea that creating, copying, and distributing music must be as unrestricted as breathing air, plucking a blade of grass, or basking in the rays of the sun.

What does it mean to use the term 'Free Music'?

The idea is similar to the notion of Free Software¹, and like with freeware, the word 'free' refers to freedom, not price. Specifically, Free Music means that any individual has the freedom of copying, distributing, and modifying music for personal, noncommercial purposes. Free Music does not mean that musicians cannot charge for records, tapes, CDs, or DATs.

The above definition of Free implies that any tangible object cannot be made free. However, something that can be copied arbitrarily many times, like music, should be set free. When I say music, I mean the expression of ideas (in the form of a musical composition or a sound recording) on some medium, and not the medium itself. Thus you have the freedom to make a copy of a CD I've created, the freedom to download soundfiles of songs I've created from my server on the Internet, the freedom to cover or improve upon a song I've written, but you are not necessarily entitled to free CDs.

Why must we Free Music?

Music is a creative process. Today, when a musician publishes music, i.e. exposes it to the outside world, only a privileged set of individuals are able to use the music as they please.

However, the artist has drawn from the creativity of many other musicians and there is an existential responsibility placed upon them to give this back unconditionally, so creativity is fostered among people. As a dissenting opinion in the *Vanna White vs. Samsung* case², Judge Kozinski writes, "All creators draw in part on the work of those who came before, referring to it, building on it, poking fun at it; we call this creativity, not piracy".

Why is freeing music the ethically right thing to do?

First, limiting your creativity to specific audiences, especially based on monetary reasons, is shirking existential responsibility and destructive to society as a whole; today, when people create, they're creating by standing on the shoulders of giants. Second, it's fair that people pay for music only if they like it after listening to it first; the present system does not allow for this for all forms of music. Third, in order to prevent 'illegal' copies from being made, a tremendous burden (restricting legitimate expression) must be placed on all individuals to circumvent what is human nature. This is a rather impossible task and is probably the reason the AHRA was passed in the first place. Fourth, the derivative works clause prevents the incorporation of your own ideas to enhance other people's expressions, and this is abridges the free exchange of ideas and information.

Finally, the current practices of the recording industry, which exploit both artist and consumer in the interests of profit, are unethical, and one must take steps to force changes.

What about the intellectual property rights of the individual?

Intellectual property and other such 'rights' have essentially existed to benefit society rather than the individual. The U.S. Constitution, for example, states that the purpose of Copyright is "to promote the progress of science and useful arts". The Free Music Philosophy ensures that both society and the individual benefit. The individual's creative freedom is completely unabridged. This freedom is more important than any 'right' society could give. To quote Stallman,¹ "Control over the use of one's ideas really constitutes control over other people's lives; and it is usually used to make their lives more difficult".

Won't musicians starve to death if they freed their music?

Musicians currently make money through a variety of sources: sales of records, merchandise and concert tickets, and royalties from commercial airplay. Freeing music will certainly not be detrimental to the sales of merchandise and concert tickets, nor will it affect compulsory or performance royalties. If anything, it will improve sales since people will continue supporting artists they like by going to their concerts and buying their merchandise. Profits from record sales will also not be affected because people will be encouraged to buy directly from the artist for the added bonuses of liner notes, lyrics sheets, and packaging. Thus Free Music can be used as a marketing tool to ensure that musicians do not starve. An approach where people send the artist a 'donation', if they found value in the music they copied, is another way to make money in a direct fashion. This could become an ingrained practice in society, like tipping, where even though there is no enforced requirement to tip for various services, people do anyway.

Won't talented and dedicated musicians give up music because there's a possibility they won't be multi-millionaires?

Consider the fact that except for a few hundred musicians who are on top of the billboard charts, the chances of making a living by record sales in the present system are very low. This system cannot be worse for most musicians. In fact, this is an excellent reason to justify the statement that most musicians perform and record with creativity as the primary motivation – any money-minded person can easily use their talents in other fields to increase the probability of actually making some. Thus the source of talented music will never dry up. What we might actually see is more creative and self-indulgent forms of music being perpetuated.

Shouldn't musicians ask rewards for their creativity?

Sure they can. As a musician, I'm happy when someone appreciates my creativity and shows it in some form. But I also do not believe that musicians should want rewards in ways that restrict the spread of music. As Stallman writes,¹ "The desire to be rewarded for one's creativity does not justify depriving the world in general of all or part of that creativity".

But the above question is worded wrong. It should be: Should record companies, controlling people's activities in order to achieve monetary gains, make every music lover pay them in the name of musicians as long as they give back a small fraction of what they make in order to justify the charade?

I think not.

What should you, as a music fan, do?

If the freedom of copying and using music appeals to you and you would like the idea spread around, then when you copy an album of anyone, regardless of whether they follow this philosophy or not, send them a donation to enable them to continue their making of music. What you contribute should be dependent on what the music was worth to you. You could also go to the artist's concerts or buy releases and merchandise directly from the artist. Finally, if you have the resources, you could support band(s) which have adopted the FMP by putting their music on the Internet. Support the music you like in some way! (This is independent of the notion of Free Music.)

Why will the Free Music Philosophy work?

In this digital age, the quality of home recordings has substantially increased, to a point where 'perfect' replicas of audio recordings are made easily. Recordings can thus be spread around without the need for major distribution. If the music is good, it will spread far more rapidly, in an almost exponential fashion, rivalling the distribution power of a major record label. Further, the Internet allows for a even greater distribution. If you consider the approach that asks for donations, listed above, you could, in theory, make more money than by being on a major label, and still retain all the creative freedom possible. You will be eliminating all the middlemen and be able to provide CDs for prices four times cheaper than what they are sold for, and still make more profit per CD sold than you would by being on a major label!

The freeware idea in terms of computer software, which operates under similar prin-

ciples, has worked.² Consider the fact that the best-written pieces of computer software are also software that can be copied without restriction (this includes Linux, and all the GNU software, and various software related to making music like sound format converters, sequencers, and multitrack recorders). Further, there is a thriving commercial sector based on the distribution of free software. I see no reason why the Free Music should also not produce equally excellent results.

How does one go about freeing music?

1. Set up a server on the Internet with your music, or deposit your soundfiles in a Free Music Archive (FMA) where people can access your music over the net. I am currently compiling a list of sites that will let you store your music files.³

2. Include a notice of this form with all records, tapes, CDs, and DATs you sell/give away: Permission to copy, modify, and distribute the musical compositions and sound recordings on this album, provided this notice is included with every copy that is made, is given for non-commercial use. If you obtained this by making a copy, and if you find value in this music and wish to support it, please send a donation, based on whatever you thought the music was worth, to the address given on this notice and include a copy of this document if you wish. If you do support the Free Music Philosophy idea, and have a site on the Internet, a link back to this site would be useful. In a sense, that statement is copylefting your music.⁴

The donation request is an optional one. Restricting it to noncommercial uses is also optional.

NOTES

1 <http://www.gnu.ai.mit.edu/gnu/manifesto.html>

The GNU Manifesto by Richard Stallman.

2 <http://www.gnu.ai.mit.edu>

The official GNU/Free Software Foundation www site.

3 <http://www.ram.org/ramblings/philosophy/fmp/fma.html>

List of sites where you can free your music (and those that support it).

4 <http://www.gnu.ai.mit.edu/copyleft/copyleft.html>

What is Copyleft?



Free Software as Collaborative Text ¹

FLORIAN CRAMER

> WHAT IS FREE SOFTWARE?

Why discuss Free Software in the context of net arts and net cultures?

Since about two years, Free Software - or 'Open Source' - has drawn increasing attention from artistic net cultures. The *Wizards of OS* conference, first held in Berlin in 1999, was the most prolific event to bridge the gap between the arts, humanities and social sciences on the one hand and Free Software culture on the other. The politics of copyleft and free distribution of code and knowledge soon turned out to be a common ground of discourse. In this paper, I will take a different aspect into consideration by reading Free Software as a net culture and its code as a multi-layered, collaborative text. Seen as a literary practice, Free Software development is an avant-garde of writing in digital networks, and even more: Since Free Software is at the heart of the technical infrastructure of the Internet, it has - to a large extent - written its own digital network.

Definition of Free Software

In this paper, 'Free Software' does not refer to 'Freeware', 'Shareware' or other proprietary software given away at no cost - like Microsoft Internet Explorer, QuickTime and Real Player - but is understood in accordance with the definitions of Free Software Foundation <http://www.fsf.org> as software which is "free as in free speech, not as in free beer". Among the best-known examples of Free Software are the Linux kernel, the GNU tools and the Apache web server.

Since 1998, the term 'Free Software' competes with 'Open Source', a term launched by a group around the writer and programmer Eric S. Raymond. According to this group, 'Open Source' is only a different name for the same thing to gain more mainstream acceptance in the world of computing.² The Open Source Definition ^[Opeb] therefore draws upon the older Free Software Guidelines ^[Deb] of Debian, a non-commercial GNU/Linux distribution made by volunteers.³ The guidelines can be summarized as follows:

- 1 Free Software may be freely copied.
- 2 Not only the executable binary code, but also the program source code are freely available.
- 3 The source code may be modified and used for other programs by anyone.
- 4 There are no restrictions on the use of Free Software. Even if Free Software is used for commercial purposes, no license fees have to be paid.

5 There are no restrictions on the distribution of Free Software. Free Software may be sold for money even without paying the programmers.

Since the same criteria apply to 'Open Source', the two concepts indeed do not differ in technical terms. Yet each of both terms has its ambiguities: While 'Free Software' tends to get confused with Freeware and Shareware,⁴ 'Open Source' is easy to be mixed up with 'open standards' - like the HTML format and the http protocol - and with software like Sun's Java whose source code is publicly available, but only under a restrictive license. It is particularly important to differentiate 'Open Source' and 'Free Software' from open standards. While open standards are mandatory technical specifications set up by committees like the Internet Engineering Taskforce (IETF) and the World Wide Web Consortium (W3C), 'Open Source' or 'Free Software' developers code whatever they like for their own fun, and they are free to split their projects and develop the code into separate directions if a consensus can no longer be reached.⁵

Since misconceptions of 'Open Source' are so common, I will stick with the less popular, but somewhat clearer term 'Free Software'.

Free Software History

It is not accidental that history of Free Software runs parallel to the history of the Internet. The Internet is built on Unix networking technology to a large extent. Academic institutions could get Unix for a 'nominal fee' including its source code in the early 1970s, and it remains to be the historical base or model of the common Free Software operating systems BSD and GNU/Linux.

The affinity of the Internet and Unix technology still persists on various level: E-Mail is nothing but the Unix mail command. An E-Mail address of the form xy@z.com is made up of what's historically a user name on a multiuser operating system and, following the "@", the system's host name. This host name is resolved via the free Unix software bind according to the Internet domain name system (DNS); DNS itself is nothing but a networked extension of the Unix system file /etc/hosts. Since the Internet has marginalized or even replaced proprietary computer networks like IBM's EARN/Bitnet, Compuserve, the German Btx and the French Minitel, Unix networking technology is standard on all computing platforms.

In the 1970s, multiuser operating systems particularly attracted student hacker communities at the MIT and at the University of California at Berkeley. The concepts of open, decentralized computer networks and free multiuser operating systems have their origin in the computer science labs of these institutions. While the MIT hackers wrote their own operating system ITS and the Berkeley hackers improved and extended the original Unix codebase, their 'hacks' eventually evolved into:

- 1 the BSD family of operating systems with the free versions FreeBSD, NetBSD and OpenBSD. All of them use a codebase that was originally developed in Berkeley under the project leadership of Bill Joy.
- 2 the GNU/Linux operating system. All major Linux-based operating system distributions-RedHat Linux, SuSE Linux, Turbo Linux, Debian GNU/Linux, Mandrake Linux, Corel Linux OS and Caldera OpenLinux, to name only a few, build on the GNU software written since 1984 by the Free Software Foundation (FSF) and on the Linux kernel written

since 1991 under the project leadership of Linus Torvalds.⁶ The FSF was founded and is still being led by former MIT hacker Richard M. Stallman.

Open technology has been a key factor for the acceptance of computers and networking: The open architecture of the IBM Personal Computer made computers cheap and popular since the 1980s, and with the open architecture of the Internet, global networking became popular in the early 1990s. Lately, Free Software has made high-end Unix server computing available to anyone willing to learn the technical details. Whether Free Software can become as popular on mainstream desktop computers and eventually de-commoditize all computer software remains to be seen, but is not the question I want to investigate here.

➤ FREE SOFTWARE AS A NET CULTURE

In the middle of the 1990s, 'net culture' became the keyword for artistic, art-critical and political discourse in the Internet. The term was closely identified with mailing lists like Nettime <http://www.nettime.org> and Rhizome <http://www.rhizome.org>, conferences like the one where I present this paper and print publications like the Nettime anthology ^[BMBB+99]. 'Net culture' used to be pronounced as a singular noun in these forums and media referring only to the discourse they created.

Free Software is an outstanding example that there is not one, but many net cultures. It predates artistic net cultures in the Internet by roughly twenty years. The Free Software copyleft can be seen as the quintessential reflection of this long experience. Invented to preserve the traditional academic-artistic freedom of speech and citation in the digital realm, the copyleft has radically rewritten it nevertheless. The concept that code, i.e. text, may not only be freely copied but even modified ('patched'), willfully recycled and commercially redistributed by anyone without the author's permit is foreign to the post-medieval Western arts and sciences. In print culture, such practices are considered plagiarism and theft.

Even for the digital net arts, the copyleft remains an unresolved challenge. Many, if not most, net artworks depend on proprietary authoring and display software,⁷ and the distribution terms of their code are rarely clarified.⁸ Yet Free Software has as subtly as significantly influenced the digitally networked arts. Without free E-mail server software like Majordomo <http://www.greatcircle.com/majordomo/> and Sendmail <http://www.sendmail.org>, and the overall possibility to set up inexpensive servers using the GNU/Linux and BSD operating systems on stock PC hardware, the artistic net cultures of Nettime et al hardly could have operated non-commercially and with free participation.⁹ Friedrich Kittler's observation that artistic tools conceptually shape what is made with them ^[K485] also applies to the net arts. The fact that Majordomo and Sendmail became major tools of artistic net activity is an important - but of course not the sole - explanation why contemporary Net. art tends towards conceptual, discursive and text-heavy work instead of the immersive 'virtual reality' environments many critics had expected them to deliver. The latter would have required expensive proprietary software for design and display, closed high-speed networks and, as a result, dependence on highly funded institutional infrastructures, limited community participation and top-down instead of bottom-up organization of this particular net culture.

> FREE SOFTWARE AS WRITING

The relevance of Free Software for other net cultures is not limited to the tools it has created and the infrastructures it has made possible, simply because those tools themselves are the very object of Free Software culture: they are text, results of complex textual processing. Moreover, this text is being produced with tools which themselves are free code.

While the phenomenon that text is being built with tools which are source text themselves applies to the proprietary software as well, there is an important difference: Free Software source text is not withdrawn from the public. It cannot be abandoned by company management and does not disappear when development has ceased. All Free Software builds up to a public repository of text-coded, free-to-use knowledge. It accumulates to an archive. Instead of being written from scratch, new Free Software can be built from whatsoever is in that archive. Free Software therefore is highly intertextual. Free Software development is the earliest and still most successful practice of collaborative writing in computer networks. With its system of textual production and politics of code, Free Software is by far the more advanced net literature than what is commonly understood as net poetry and net fiction.¹⁰ Free Software may be seen simultaneously as

- ~ a freely accessible, ever-growing body of code-a text archive;
- ~ recursive (i.e. self-applied) text processing, since available text is used both as a source and as a building tool to create new code;
- ~ text processing even through the medium of text, because Free Software development infrastructures mostly depend on mailing lists and command-based version control systems.
- ~ a 'hacker' culture which advocates freedom of information and codes its politics into the legal texts of the copyleft.

The coded copyleft might be the clearest interstice between Free Software as a net culture and Free Software as net text. Both these aspects already come into play when Free Software is being written. Free Software development is typically achieved by self-organized volunteer projects whose members communicate and collaborate via the Internet. The development work consists of:

1 Writing program source text

This involves the evaluation of available Free Software source code for possible inclusion and adaptation. It also involves picking and compiling the coding tools which themselves are Free Software source text.

To accommodate its own needs, Free Software has developed arguably the most sophisticated writing tools for the distributed authoring of text. Particularly outstanding is the Concurrent Versioning System (CVS) ^[ced99] which allows authors to take portions of text-regardless whether it is written in programming language or in natural language-over the Internet, work on them at home, and synchronize the changes with the revisions of other collaborators any time. CVS-based writing might be technically the most radical departure from the typewriter and mail paradigm in text editing to date.

2 Writing documentation text

Documentation is both internal and external to the program source text when the latter contains annotations and separate reference documentation is being written. Free manuals remain a political issue within Free Software development. A number of companies base their business model on giving away the software under free licenses and charging for documentation and support.¹¹ In the ideal case however, a second textual recursion occurs within Free Software which is common in all modern knowledge systems since Diderot's and d'Alembert's *Encyclopédie*.¹² The text teaches the reader all steps which were necessary for its creation so that all the information it contains may be re-applied to itself.

3 Communication over mailing lists, bugtracking systems and IRC

Free Software development teams almost exclusively constitute themselves and communicate over the Internet, in mailing lists and on IRC servers. Interpersonal communication therefore is a third layer of text which regulates the design of both program and documentation source text. It operates as a cybernetic feedback loop for the development process.

4 Writing legal text

Free Software is legally defined. It is software under certain licenses, i.e. legal documents. The most common types of copyleft include the GNU General Public License <http://www.gnu.org/copyleft/gpl.html>, the BSD License and the Perl Artistic License. Whether program source text is free solely depends on whether it is copylefted. Legal text therefore is the fourth layer of text regulating the entire flow of text generated in Free Software projects.

Free Software is thus a highly sophisticated system of recursive text generation for a public pool of knowledge. It is text code created from text code with text-coded tools and textual communication over networks. The types of texts processed in Free Software are extremely diverse: They include executable binaries,¹³ text written in programming languages, text written in natural languages for documentation, text written in natural languages for communicating and steering development, and legal texts defining the fair-play rules of the recursive textual processing.

> OBJECTIONS

Both the Free Software engineering and the net artistic camps are traditionally skeptical about attempts to read Free Software in terms of the net arts. The objections were particularly voiced when the Linux kernel was awarded the Golden Nica in the 'net' category of Ars Electronica 1999. At the Wizards of OS conference in the same year, the net artist Alexej Shulgin argued that Free Software is 'functional' while Net.art is 'non-functional', self-sufficient code.¹⁴

I do not find this point viable from an analytical perspective, since the division between 'functional' and 'non-functional' is purely arbitrary and subjective. I/O/D's Web Stalker ^[V097],

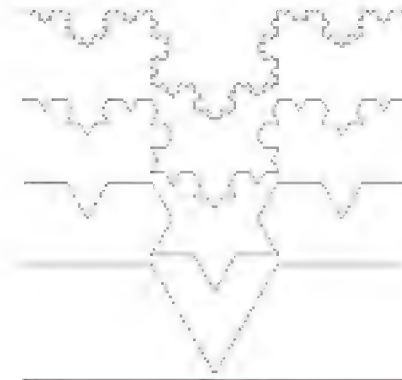
an experimental Web browser and well-known Net.art work, is arguably more 'functional' than the teddy bear desktop emblem xteddy which is contained in all major GNU/ Linux distributions. Moreover, the distinction between 'functional' Free Software and 'non-functional'. Net.art falls back into late-romanticist notions of the absolute artwork versus lower craftsmanship. It also neglects that with its multiple self-applications of text, the development and use of Free Software is to a large extent its own purpose. No other operating system is as open and seductive to be used as an end to itself as GNU/ Linux.

Just as arbitrary as the distinction between 'functional' and 'non-functional' software is that between program source code and poetry. To date, all attempts to formally define poetry and poetic language have failed. The decision whether a text is poetry will always be up to the reader. The notion of 'program code' versus 'poetry' was first put into question by the French poet and mathematician François le Lionnais, who co-founded the Oulipo group with Raymond Queneau. In 1973, le Lionnais released a volume of poetry written in the programming language Algol. The practice has been revived in the 1990s by people who write poems in the Perl scripting language.

> CONCLUSION

Read as a net literature and a net culture, Free Software is a highly sophisticated system of self-applied text and social interactions. No other net culture has invented its computer code as thoroughly, and no other net culture has acquired a similar awareness of the culture and politics of the digital text.

Much Net.art, net literature and critical discourse about them has focused on the aesthetics and politics of desktop user interfaces. In its focus on code, Free Software shows that net cultures are about more than just what is between people and the network. To date, it remains a rare example of electronic literature which does not confuse the Internet with web browsers.



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NOTES

- 1 This paper was presented at the conference Interface 5 on the panel "Minor Media Operations", Hamburg, Warburg-Haus, September 15, 2000.
- 2 To quote from Raymond's Frequently Asked Questions about Open Source, "The Open Source Initiative is a marketing program for free software. It's a pitch for free software on solid pragmatic grounds rather than ideological tub-thumping. The winning substance has not changed, the losing attitude and symbolism have".
[Open]
- 3 Both the Debian Free Software Guidelines and the Open Source Definition were originally drafted by Bruce Perens, a Free Software developer and editor of the website technocrat.net <http://www.technocrat.net>.
- 4 i.e. binary-only software which can be downloaded freely and used without licenses fees (Freeware) or by paying comparatively small licenses fees (Shareware).
- 5 A prominent example is the XEmacs <http://www.xemacs.org/text editor which 'forked' its codebase from GNU Emacs> <http://www.gnu.org/software/emacs/emacs.htm>. The same would be impossible in open standards development. The social dynamics and institutional control of open standards development is excellently described in Jeanette Hofmanns (German) essay *Der Erfolg offener Standards und seine Nebenwirkungen*.
[Ho99]
- 6 There is an ongoing debate in Free Software culture whether operating systems based on the Linux kernel should be called 'Linux' or rather 'GNU/Linux'. In order to be functional at all, a 'Linux' setup relies upon the GNU C Compiler (gcc) to translate all program sourcecode into machine-executable binary software, the GNU C Library (glibc) as the interface between the Linux kernel and userspace applications, and the GNU tools for the basic user commands. Although it is possible to replace at least the GNU tools and the glibc with non-GNU workalikes, all common 'Linux' distributions use the Linux + GNU software setup. I will therefore stick with the name 'GNU/Linux' where I refer not only to the kernel, but to the whole operating system.
- 7 Such as Macromedia's Shockwave and Flash in *Net.art*, Opcode's MAX in electronic music and Eastgate's Storyspace in hypertext fictions.
- 8 The artist group 0100101110101101.ORG <http://www.0100101110101101.org> put this issue up front when it mirrored and partially modified well-known Net.art web sites on its own web site.
- 9 Early artistic computer networks like the Thing BBS <http://www.thing.net> charged their subscribers (at least in Berlin) before they migrated into the Internet.
- 10 How net literature - 'hyperfiction' and 'new media poetry' - relates to poetic practices rooted in programmer's cultures is discussed in more detail in my (German) paper.
[C00]
- 11 Among those companies are O'Reilly publishers, Sendmail Inc., VA Linux, Scriptics, Helix Code and Eazel. All of them are involved in the development or documentation of critical components of GNU/Linux operating systems.
- 12 I thank Wau Holland for pointing this out to me in a preparatory meeting for the first Wizards of OS conference.
- 13 Which can be read as 'text' if text is linguistically and semiotically defined as a finite number of discrete

signs chosen from a finite set of signs. In computing, 'text' is rather colloquially understood as code from natural-language alphabets as opposed to binary code. Being a philologist, I refer to the prior concept of 'text'.

- 14 According to [Bos98], the label Net.art was coined in 1996 by the net artist Vuk Cosic and has been associated with a particular generation of net artists since (involving, among others, Cosic himself, Heath Bunting, Olia Lialina, Alexej Shulgin, jodi and I/O/D).

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[Opeb]

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Cooking Pot Markets: Gift Economy

RISHABH IYER GHOSH

What is value? / Is the Internet really an economy?

This is perhaps the wrong question - akin to asking whether direct-sales, or academic research is an economy. There is much of value to be found on the Internet, much production and consumption of goods and services. This is hardly surprising, given that the Net has attracted 60 million people and is growing in population at more than 100% annually. Many of the things found on the Net, though, can be found off it - free software such as Linux¹ is distributed on CD-ROMs (for which you pay), not just on Internet FTP sites. The Net is not another planet, the people populating it are part of some 'real world' society too, trading, producing and consuming things off-line.

Although the word 'virtual', like 'cyber', has come to be associated with everything on-line, the act of creating products - such as home pages and notes published in discussion groups - is as real on the Net as it is in a factory or newspaper office. The 'virtual' trade in knowledge products on-line, their 'virtual' consumption and production by millions of people, are very real indeed, and affect the world outside the Net if only because its own population forms an increasing (if still small) part of that world's.

This makes it all the more important to take note of differences between the part of the world's economy that is on the Net, and the rest. Millions of people have been interacting and participating in what they clearly value, using an economic logic different from what they might normally use in off-line lives. So there must be a definite possibility of the on-line economic logic spreading beyond the confines of the Net - it's the same people in both worlds, after all. There is no question that there are differences between the economic logic - the application of basic economic principles - on and off the Net.

To begin with, much of the economic activity on the Net involves value but no money. Until a few years ago, there was almost no commercial activity on the Internet. As commerce discovered the Net it was natural for the Net to become commercial - which makes the incredibly vast amount of resources still available free remarkable. The free resources of the Net greatly outweigh all commercial resources, especially if one counts only purely on-line transactions (e.g. a bookseller like Amazon² makes money selling books, which requires the physical transportation of goods). It is quite hard to put a price on the value of the Internet's free resources, at least in part because they exist because they don't have prices attached. They exist in a market of implicit transactions.³

The economics of gossip

I prefer arguing with extreme cases, so I won't start with the obvious worth of free operating systems (Linux) or Web server software (Apache)⁴. Newsgroup discussions are a less obvious case, so I'll begin there.

If you are a heavy user of the Net, you might wonder how all your little posts to discussion groups - say, rec.pets.cats - could possibly be called economic transactions. But they are.

The Internet has, of course, changed enormously in the past couple of years, indeed it changes all the time as its population keeps doubling⁵. Many early users of the Net complain about recent users - pejoratively calling them 'newbies' - and the 'junk' they post. Although posts were more relevant and better written, on average, before the Net became headline news, few were likely to be accepted for publication in the average newspaper, leave alone an academic journal. But I, like most people, found many of these the implicit tag of 'intra-office industry gossip distributor' or 'junior colleague advisor'. But on the Net these implicit transactions stand out in stark relief, suggesting even more strongly that in a knowledge economy, every exchange of knowledge in any form is an act of trade⁶.

Every snippet posted to a discussion group, every little Web page, every skim through a FAQ list and every snoop into an on-line chat session is an act of production or consumption, often both. There is no specific economic inherent value in a product. Value lies in the willingness of people to consume a good, and this potentially exists in anything that people can produce and pass on.

Having settled that bad writing and even junk mail is a part, however reprehensible, of the Internet's economy, let us proceed to Linux. After all software, in particular large operating-system software occupying up to six CD-ROMs when distributed off-line, is undeniably an economic good⁷. And Linux with its loosely organised community of developer-users, and its no-charge policy, undeniably has an economic logic that seems, at first, new.

Something for nothing?

Linus Torvalds did not release Linux source code free of charge to the world as a lark, or because he was naïve, but because it was a "natural decision within the community that [he] felt [he] wanted to be a part of".⁸ Any economic logic of this community - the Internet - has to be found somewhere in that "natural decision". It is found in whatever it was that motivated Torvalds, like so many others on the Net, to act as he did and produce without direct monetary payment.

Of course, it is the motivation behind people's patterns of consumption and, what is more relevant in the case of Linux, production that forms the marrow of economics. Such motivation is usually expressed in terms of curves of supply and demand, measured by costs and prices in dollars and cents. Figuring out what motivates, leave alone measuring it, is much tougher when price tags don't exist. It is simpler to just assume that motivations only exist when prices are attached, and not attempt to find economic reason in actions motivated by things other than money; simpler, therefore, just to assume as we often do that the Internet has no economic logic at all.

This is wrong. The best portions of our lives usually do come without price tags on them; that they're the best parts imply that they have value to us, even if they don't cost money. The pricelessness here doesn't matter much, not unless you're trying to build an economic model for love, friendship and fresh air. But you don't need to be an economist to know that all of these things do involve motives, and perhaps also the matching of (ordinal) demand and supply, even if demand curves are not easily measured without price tags. Economics may not often need to be used in an environment where valuables are free, but that doesn't necessarily mean it can't be so used. And any economic logic of the Internet has to have come to terms with the difficulty of measuring such value.

Being on the Internet is not quite like being in love (though some would argue about that) - but it brings with it the same sheen of pricelessness. On the Internet, through much of its past, the bulk of its present and the best of its foreseeable future, prices often don't matter at all. People don't seem to want to pay - or charge - for the most popular goods and services that breed on the Internet. Not only is information usually free on the Net, it even wants to be free, so they say⁹.

But 'free' is the wrong word: like love, information, however free in terms of hard cash, is extremely valuable. So it makes sense to assume that the 3 million people on the Internet who publish matters of their interest on their home pages on the Web, and the several million who contribute to communities in the form of newsgroups and mailing-lists, and of course anyone who ever writes free software, believe they're getting something out of it for themselves. They are clearly not getting cash; their 'payment' might be the contributions from others that balance their own work, or something as intangible as the satisfaction of having their words read by millions around the world.

While writing my weekly newspaper column on the information society¹⁰, I was distributing an e-mail version free of charge on the Internet. A subscription to the e-mail column was available to anyone who asked, and a number of rather well known people began to receive the column each week. My readers often responded with useful comments; I often wondered whether people would pay for a readership like this. Many readers add to your

reputation, they make good contacts, helping you out in various ways. Simply by reading what you write, they add value to it - an endorsement, of sorts. So who should pay whom - the reader for the work written, or the writer for the work read?¹¹

The notion that attention has value is not new - and has been formally analysed in the advertising industry for decades. In the context of information and the Internet, the 'attention economy' has been described in recent papers.^{11a} It would be facile to suggest that attention necessarily has innate value of its own. In some situations, being read by certain people may well have value in itself - assuming the attention of such people is a rare commodity with respect to what you write. But more often than not - especially when it is the attention of a large distributed audience in question - attention is a proxy for further value. This may appear in the form of useful comments (or bug reports from Linux users), assistance and contacts - or simply an enhanced reputation that translates into better access to things of value at a later point [see section "Is reputation a Convertible Currency?"].

Even those who have never studied economics have an idea of its basic principles: that prices rise with scarcity and fall in a glut, that they are settled when what consumers will pay matches what producers can charge. These principles obviously work, as can be seen in day-to-day life. But that's the 'real world' of things you can drop on your toe. Will they work in a knowledge economy? After all, this is where you frequently don't really know what the 'thing' is that you're buying or selling, or clearly when it is that you're doing it, or, as in the case of my column, even whether you're buying - or selling. Contrary to what many doom-sayers and hype-mongers suggest, it always seemed to me that the basic principles of economics would work in an economy of knowledge, information and expertise. They are, after all, not only logical on the surface but also practically proven over centuries - a powerful combination. Even if the Internet appeared to behave strangely in how it handled value, there was no reason to believe that, if it had an economic model of its own, this would contradict the economic principles that have generally worked.

However, if Paul Samuelson's textbook definition of economics as the "study of how societies use scarce resources to produce valuable commodities and distribute them among different people"¹² remains as valid now as ever, almost all the terms in there need re-examination. This is because of the same peculiar economic behaviour of the Net that suggests it has developed its own model, the economic model of the information age.

The Internet looks like an infant microcosm of the wider tions, some 3 million copies every day across India. The whole operation, particularly the co-ordination of advertising and editorial, depends on RespNet. This internal network won the Times a listing in ComputerWorld magazine's selection of the world's best corporate users of information technology. RespNet runs on Linux, and other similar free software got off the Net.

Raj Mathur, who set up Linux on RespNet, agrees with Torvalds when the latter says, "people who are entirely willing to pay for the product and support find that the Linux way of doing things is often superior to 'real' commercial support". This is thanks to the large community of other developers and users who share problems and solutions, and provide constant, sometimes daily improvements to the system. The developer-users (the Linux incarnation of Toffler's producer-consumers, or prosumers) naturally include operators of networks similar to RespNet. So many of them can provide separately assistance that might

not be available if they were all working together in a software company - as Linux Inc - where they would be producers of the software but not consumers. This shifting base of tens of thousands of developers-users worldwide working on Linux means that the Times of India would have a tough time figuring out whom to pay, if it wanted to, so it's just as well that the support from these developers is free.

The fact that on the Internet people go looking for other people, and Linux developers look for others like them, is just one instance of the immediacy of much of the trade that takes place on the Net. When you post your message to rec.pets.cats, or create a home page - whether personal or full of your hobbies and work - you are continuously involved in trade. Other cat-lovers trade your message with theirs, visitors to your home-page trade your content with their responses, or perhaps the satisfaction of knowing that you're popular enough to get a few thousand people discovering you each week. Even when you don't charge for what you create, you're selling it, because you're using your work to buy the work of others - in a discussion group - or to buy the satisfaction of popularity - through your Web site.

What is most important about this immediacy of the implicit trades that go on all the time on the Net is its impact on notions of value. Unlike the 'real world', where things tend to have a value, as expressed in a price-tag, that is sluggish in response to change and relatively static across its individual consumers, on the Net everything is under constant revaluation. Without the intermediary of money, there are always two sides to every transaction, every transaction is potentially unique, rather than being based on a value derived through numerous similar trades between others - i.e. the price-tag.

Continuing to alternate between examples from the worlds of free software and USENET - to reiterate their equivalence in economic terms - we can see the two-sided nature of trade in this hypothetical example about cats. You may value the participants in rec.pets.cats enough to post a long note on the nomadic habits of your tom. In a different context - when the same participants are quarrelling over the relative abilities of breeds to catch mice - you may not find it worthwhile contributing, because the topic bores you. And you may be far less generous in your contributions to rec.pets.dogs. You value the discussion on dogs, and catching mice, much less than a discussion on tomcats, so you're not willing to make a contribution. This would be 'selling' your writing cheap; but when you get feedback on tomcats in exchange for your post, it's the right price.

This example may seem somewhat contrived, but only because decisions on when and where to post a message or participate in on-line discussions are taken all the time, so often that they're barely noticed as actual decisions. In a knowledge economy, however, the decision to write and freely distribute your note on cats rather than dogs is no less an economic one than is the decision to order Chinese take-out instead of pizza in the 'real world'. Both are a question of resources allocation - your time and effort in one case, your money (which actually represents your time and effort) in another.

Unlike noodles and bread, readers on Internet newsgroups don't come with price-tags pinned on, so common-place decisions involving your on-line acts of production require that you figure out the relative values of what you get and what you give, all the time. Others are figuring out the worth of your contribution all the time, too. Life on the Internet is like a per-

petual auction with ideas instead of money.

That note on your tomcat probably does not deserve the glorious title of idea; certainly the warm feeling that you got in exchange for posting it - when people responded positively and flocked to your homepage to see pictures of your cat - couldn't possibly be classed with 'real ideas' (such as the one to black out the Web in protest against the CDA).¹⁴ Still, for the sake of convenience the subjects of trade on the Net can be categorized as idea (goods and services) and reputation (which when enhanced causes all those warm, satisfied feelings, and more tangible benefits too).

Ideas are sold for other ideas or an enhanced reputation; reputations are enhanced among buyers of ideas, and reputations are themselves bought and sold all the time for other reputations, as we shall see later. The basic difference is that reputation (or attention) is, like money, a proxy. It is not produced or consumed in itself, but is a by-product of underlying production of actual goods ('ideas' in our binary terminology).

Two sides to a trade

Unlike the markets of the 'real world', where trade is denominated in some form of money, on the Net every trade of ideas and reputations is a direct, equal exchange, in forms derivative of barter. This means that not only are there two sides to every trade as far as the transaction of exchanging one thing for another goes - which also applies to trades involving money - there are also two points of view in any exchange, two conceptions of where the value lies. (In a monetary transaction, by definition, both parties see the value as fixed by the price.)

As the poster of notes on tomcats, the value of your posting something is in throwing your note into the cooking-pot of participatory discussion that is *rec.pets.cats* and seeing what comes out. As the author of a page on cats, what you value in exchange for your words and photographs is the visits and comments of others. On the other hand, as a participant on *rec.pets.cats* I value your post for its humour and what it tells me to expect when my kitten grows up; as a visitor to your Web page I learn about cats and enjoy pretty pictures.

When I buy your book about cats, it's clear that I am the consumer, you the producer. On the Net, this clear black-and-white distinction disappears; any exchange can be seen as two simultaneous transactions, with interchanging roles for producer and consumer. In one transaction, you are buying feedback to your ideas about cats; in the other, I am buying those ideas. In the 'real world' this would happen in a very roundabout manner, through at least two exchanges: in one, I pay for your book in cash; in the next, you send me a cheque for my response. This does not happen very often! (The exception is in the academic world, where neither of us would get money from the *Journal of Cat Studies* for our contributions; instead our employers would pay us to think about cats.)

As soon as you see that every message posted and every Web site visited is an act of trade - as is the reading or publishing of a paper in an academic journal - any pretence at an inherent value of economic goods through a price-tag is lost.

In a barter exchange the value of nothing is absolute. Both parties to a barter have to provide something of value to the other; this something is not a universally or even widely

accepted intermediary such as money. There can be no formal price-tags, as an evaluation must take place on the spot at the time of exchange. When you barter you are, in general, not likely to exchange your produce for another's in order to make a further exchange with that. Unlike the money you receive when you sell something - which you value only in its ability to be exchanged for yet another thing - in a barter transaction you normally yourself use, and obviously value, what you receive.

When the contribution of each side to a barter is used directly by the other, it further blurs the distinction between buyer and seller. In the 'real world' barter did not, of course, take place between buyer and seller but between two producer-consumers in one transaction. When I trade my grain for your chicken, there's no buyer or seller, although one of us may be hungrier than or have different tastes from the other. On the Internet, say in the Linux world, where it may seem at first that there's a clear buyer (*The Times of India*) and an equally clear, if aggregate seller (the Linux developer community) there is, in fact, little such distinction.

Just as the existence of the thousands of independent Linux developers are valuable to the newspaper because they are also users of the product - and may face similar problems - other Linux developers welcome *The Times of India* because how it faces its problems could help them as Linux users. As Torvalds says, "[t]here are lots of advantages in a free system, the obvious one being that it allows more developers to work on [Linux], and extend [Linux]". However, "even more important" is that making Linux free brought "in one fell swoop ... a lot of people who used it" - not just reporting problems, but playing a crucial role in the further development of the system. Torvalds notes that a single person or organisation "doesn't even think of all the uses a large user community would have for a general-purpose system" - so the large user base of Linux was "actually ... a larger bonus than the developer base".

Of course Linux is far from being the only software product that blurs the producer-consumer divide. Much software - even the kind sold by companies for money - is now highly dependent on user feedback. This feedback is not just to give the producer information on market needs - which is not normally thought of as something consumers can barter with - but for testing and sometimes fixing technical problems with programs. Netscape has had a public campaign to encourage users to find bugs in their code - which were traditionally, and expectedly, scanned for and fixed within software companies. So 'real world' companies also often buy from their customers even as they sell.

(When it starts giving its source code away free, Netscape will encourage users to fix bugs too, and in general to become developers. It will become a company grown even closer buying from its customers than most.)

Can you eat goodwill?

Perhaps you will agree that when you next post a note on cats, you're not giving away something for nothing. But what you get in return is often pretty intangible stuff - satisfaction, participation in discussion and even answers to cat-related questions are all very well, and may be fair exchange for your own little notes, but don't seem substantial enough to make much of an economy. As for Linux - it's fine to talk about a large base of user-developers

all helping one another, but what has all this brought Linus Torvalds? Although Linux did get vastly improved by the continuing efforts of others, none of this would have happened without Torvalds's original version, released free. Assuming that he's not interested in Linux as a hobby, he's got to make a living somehow. Doesn't he seem to have just thrown away a great product for nothing?

First, let's see what intangible 'payment' Linux brought. In the circles that might matter to Torvalds's career, he's a sort of god. Most of the technology of the Internet, including tools such as Linux, HTML (the language of the Web) and the Web server Apache (with 45% of the total market, enough for Bill Gates to call it Microsoft's "biggest competitor"¹⁵) have been developed and distributed without payment. As government and academic participation declined as a proportion of the total Internet developer community, most recent 'free' technology has not been subsidised, either. The main thing people like Torvalds get in exchange for their work is an enhanced reputation. So there are, in fact, lots of Net gods.

Net gods get hungry, though, and reputation doesn't buy pizzas. So what does Torvalds do? As it turns out, he was still in the University of Helsinki (in October 1996, when I first interviewed him; he's now with an American company where "it's actually in [his] contract that [to do] Linux part-time"). "Doing Linux hasn't officially been part of my job description, but that's what I've been doing", he says. His reputation helped - as Torvalds says, "in a sense I do get my pizzas paid for by Linux indirectly". Was this an academic sense, perhaps? Is Linux, then, just another of those apparently free things that has actually been paid for by an academic institution, or by a government? Not quite. Torvalds remained in the University out of choice, not necessity. Linux has paid back, because the reputation it's earned him is a convertible commodity. "Yes, you can trade in your reputation for money", says Torvalds, "[so] I don't exactly expect to go hungry if I decide to leave the University. 'Resume: Linux' looks pretty good in many places".

Is reputation a convertible currency?

Suppose you live in a world where people trade chicken and grain and cloth - a very basic economy indeed! Suddenly one day some strangers appear, and offer to sell you a car; you want it, but "Sorry", says one of the strangers, "we don't take payment in chicken; gold, greenbacks or plastic only". What do you do? It's not hard to figure out that you have to find some way to convert your chicken into the sort of commodities acceptable to car dealers. You have to find someone willing to give you gold for your chicken, or someone who'll give you something you can trade in yet again for gold, and so on. As long as your chicken is, directly or indirectly, convertible into gold, you can buy that car.

What holds for chicken in a primitive barter economy holds also for intangibles such as ideas and reputation in the part of the economy that operates on the Internet¹⁶. And some of these intangibles, in the right circumstances, can certainly be converted into the sort of money that buys cars, leave alone pizzas to keep hunger away. This may not apply to your reputation as a cat enthusiast, though; it may not apply to all software developers all the time, either.

In the primitive barter economy, trade is limited to basic commodities with only the occasional car thrown in. Not everyone will want to buy cars, however rich they may be in

grain and cloth. Much of their earnings will go back into buying more basic commodities; only some of it will be converted into car-buying things like gold. Then again, only some people at some times will be able to find the right sequences of trades to convert chicken into gold, which may depend on context and the general demand for such unusual things in the economy.

On the Internet - indeed in any knowledge economy - it is not necessary for everything to be immediately traded into 'real world' money. If a significant part of your needs are for information products themselves, you do not need to trade in your intangible earnings from the products you create for hard cash, because you can use those intangibles to 'buy' the information you want. So you don't have to worry about converting the warm feelings you get from visits to your cat Web page into dollars, because for your information needs, and your activities on the Net, the 'reputation capital' you make will probably do.

"The cyberspace 'earnings' I get from Linux", says Torvalds, "come in the format of having a network of people that know me and trust me, and that I can depend on in return. And that kind of network of trust comes in very handy not only in cyberspace". As for converting intangible earnings from the Net, he notes that "the good thing about reputations ... is that you still have them even though you traded them in. Have your cake and eat it too!"

In 1990, Colin (Col) Needham was a research engineer for "a major US computing company which has a large industrial research facility in the UK".¹⁷ What on earth was he doing developing the Internet Movies Database, which quickly became perhaps the most comprehensive source of data on films anywhere?¹⁸

"I started the database as a fun activity back in 1990", says Needham. "There was already a list of actress filmographies being posted" - by the Net's ubiquitous hobbyists who don't want to charge for the work they do - "to [the USENET newsgroup] rec.arts.movies and I added to that by creating a companion actors list just for a little bit of fun combining movies and computing".

I never believed that people could do so much work just for 'fun'. Yet it's the most common reason I have always seen for anything of value produced on the Net. Some of these people, including Needham and Torvalds, spend several hours a day, forgetting to sleep, writing programs and creating articles and Web pages. Fun?

For close to three years, I have been publishing frequent articles on the Internet, analysing the Indian telecom and broadcasting markets. Unlike my weekly column, my analyses are published on-line only, and don't even get the fees Indian newspapers pay. True, I enjoy doing this, as I have enjoyed my prolific posts to various discussion groups over the years, but none of this has been just fun. But I have to admit that it takes a while to get to more substantial reasons for the Internet's huge productivity. After all, few people think of economics while developing free resources on the Net, and since they're not getting paid for it, the first answer that pops up to the question 'why am I doing this?' is Fun.

But there's more. "The original motivation", says Needham later, "and [the] sustained motivation right through to today was just to put something back into the Internet community in one small way ... [it's just that] over the years it turned into a bigger way!" Now that's more like it. Putting something back into the Net seemed not much clearer than 'fun' at first, but it is at least a sign that there is something Needham, like all of us, took out of the Net

in the first place.

There is, here, the first glimpse of a process of give and take, by which people do lots of work on their creations which are distributed not for nothing, but in exchange for things of value. People 'put it' to the Internet because they realise that they 'take out' from it. Although the connection between giving and taking seems tenuous at best, it is in fact crucial. Because whatever resources there are on the Net for you to take out, without payment, were all put in by others without payment; the Net's resources that you consume were produced by others for similar reasons - in exchange for what they consumed, and so on. So the economy of the Net begins to look like a vast tribal cooking-pot, surging with production to match consumption, simply because everyone understands - instinctively, perhaps - that trade need not occur in single transactions of barter, and that one product can be exchanged for millions at a time. The cooking-pot keeps boiling because people keep putting in things as they themselves, and others, take things out.

Torvalds points out, "I get the other informational products for free regardless of whether I do Linux or not". True. But although nobody knows all the time whether your contribution is exceeded by your consumption, everyone knows that if all the contributions stopped together there'd be nothing for anyone: the fire would go out. And that wouldn't be fun at all.

Needham was a film buff, and had reason to put back into the section of the Internet that fed his interest in films. He had no plans to trade in the reputation capital the IMDb earned him for money, at first, because he had a job and was using his 'reputation earnings' as brownie points, of sorts, in the on-line world of film. His intangible wealth was being used as a ticket to the consumption of intangibles, similar to the chicken-breeder's spending on grain and cloth, but not cars, in the primitive barter economy.

In contrast, Rob Hartill, who developed the software for the Web version of the IMDb, and has maintained the Web version since its inception, is a self-described 'computer junkie'. Indeed, he's better known now as one of the core developers of the free Web server, Apache¹⁹. As for movies, he says, "I like watching films when I get the chance, but I don't take it seriously; no video collection, no LD player, no movie books".²⁰ He didn't have much reason to put anything into the Internet - at least, not into its movie-loving parts. Nor could the reputation of having worked on the "greatest possible entity" that Needham sees as the IMDb be much good to Hartill; why should a computer junkie care about what film buffs think of him?

Of course, the work Hartill was extremely computer-related. "I loved the idea of database being available to jog my memory and generally just be there to play with", he says, so 'fun' was important for him too! "For me, the Web was a new media [sic] that hadn't been exploited for anything interesting", so Hartill was, naturally enough, willing to develop an interesting application with a lot of effort, in order to give it away. Someone had put the new medium of the Web into the Net, Hartill felt obliged to put in something himself. "I was looking for things to do with the Web...and I just happened to have the [movies] database sitting in my filespace". So his involvement with movies was coincidental; what Hartill was putting into the Net concerned his area of work and interest, programming for the Web. Indeed, "if it hadn't been the IMDb", says Hartill, "I'd have burnt my eyes out with some other pro-

gramming project I'm sure".

Hartill, unlike Torvalds, then decided to cash in on the reputation capital his contribution to the IMDb earned him, perhaps answering those who asked "ask why on earth I spent so much time working on [IMDb] for no apparent gain". He went to work at Los Alamos National Laboratories. "My boss at Los Alamos hired me on the basis of what he'd seen of the IMDb" - which was pretty famous, and very popular, by that time. Hartill's contribution to it was well known, so "I didn't have an interview or even talk to [Los Alamos] on the phone before meeting him on my first day [at work]".

But the IMDb, to use Needham's words, "snowballed". It has now grown so big, that Needham is working on it full-time, as are Hartill and several others with whom they formed a company. IMDb is still free, and still relies on inputs from readers - like the original version, based on the content of rec.movies.reviews. The motivation to develop it further, according to Needham, is not very different from what it was originally - "it's seeing what the database has become and means to hundreds of thousands of users and the challenges of taking it forward which motivate me". However, the fact that Needham and Hartill have formed a company to work on the database full-time means that IMDb has to be their source of real income. It is not enough for IMDb to earn intangibles such as reputation to meet their needs for intangible information products on the Net; Needham and Hartill now need their work to make some real money, tradable in the economy outside the Net. As Needham adds parenthetically, "of course I now have [the] added motivation that if we fail then my wife and kids starve too". Reputation capital can help earn tangible monetary returns: IMDb now takes paid advertising.

Cooking-pot markets

One can attempt to estimate the monetary value of the static resources of the Internet. This could be extended to software systems such as Linux, even though this is not truly a static resource as much of its value lies in the organisation of its developer community, rather than any single copy of the operating system software.

For instance, calculating that since Linux users have, on average, much fancier hardware than Windows users and could therefore pay more for the software, the 5 million-odd estimated installed base of Linux is worth some \$500 million in annual revenues. (This sort of valuation is faulty, as not everyone who uses free software would buy a full price version; however, the Business Software Alliance uses the same method to calculate losses through software piracy, where the same caveat applies.) The Apache Web server if paid for in cash ought to have revenues exceeding \$500 million, given its commanding technical and market lead over regular commercial software.

Such valuations may be imprecise and controversial - I could using similar estimates give a figure of at least \$50 billion as the notional revenues of 'free' resources on the Net - but at least they can be reasonably attempted using statistical valuation methods not altogether unfamiliar to analysts of brickspace markets. Using the Net, though, has made it quite clear that the real worth is in dynamic resources, the communities of people that make up much of the value of even the 'static' software on-line. The worth of dynamic resources is exceedingly hard to quantify, particularly since, like communities in the 'real world', they

are riven with intangibles. Try calculating the worth in dollars of, say, your neighbourhood watch community; or your old-boys'/girls' network; or simply the folk you hang out with to discuss politics (perhaps even economics!). Not easy, maybe impossible.

Yet a rough estimate of the importance of dynamic resources is possible: just figure out how much of your energy on the Net is spent in interacting with other people - through discussion groups, interactive Web sites or sites where you give feedback, on-line chat, e-mail - and compare this with the time spent simply reading static Web pages. Until recently on the Net it was universally the case that people spent most of their time interacting with others; now with the explosion of new content, and new people who are still finding their way around, the ratio may not be so high, but I expect that it will always be, in the long run, the Net's dynamic resources that are most valuable.

If dynamic resources are the most difficult to evaluate, they are also the most intangible to trade in. Yet whenever you post to rec.pets.cats this is what you're doing: trading in dynamic resources, in your post- of-the-moment that is valuable temporarily, while your value remains. The workings of this system of trade stem from the same motivation of 'fun' present when Colin Needham developed the Internet Movies Database - which, built upon newsgroup discussions, is half-dynamic. It is Needham's need to "put back" into the Net after having "taken out" so much that drives most trade in dynamic resources. It is the cooking-pot market of a seemingly altruistic value-in-giving norm that drives the economy of interacting people.

If it occurred in brickspace, my cooking-pot model would require fairly altruistic participants. A real tribal communal cooking-pot works on a pretty different model, of barter and division of labour (I provide the chicken, you the goat, she the berries, together we share the spiced stew). In our hypothetical tribe, however, people give what they have into the pot with no guarantee that they're getting a fair exchange, which smacks of altruism.

But on the Net, a cooking-pot market is far from altruistic, or it wouldn't work. This is thanks to the major cause for the erosion of value on the Internet - the problem of infinity²¹. Because it takes as much effort to distribute one copy of an original creation as a million - and because the costs are distributed across millions of people - you never lose from letting your product free in the cooking-pot, as long as you are compensated for its creation. You are not giving away something for nothing. You are giving away a million copies of something, for at least one copy of at least one other thing. Since those millions cost you nothing you lose nothing. Nor need there be a notional loss of potential earnings, because those million copies are not inherently valuable - the very fact of them being a million, and theoretically a billion or more - makes them worthless. Your effort is limited to creating one - the original - copy of your product. You are happy to receive something of value in exchange for that one creation.

What a miracle, then, that you receive not one thing of value in exchange - indeed there is no explicit act of exchange at all - but millions of unique goods made by others! Of course, you only receive 'worthless' copies; but since you only need have one copy of each original product, every one of them can have value for you. It is this asymmetry unique to the infinitely reproducing Internet that makes the cooking-pot a viable economic model, which it would not be in the long run in any brickspace tribal commune.

With a cooking-pot made of iron, what comes out is little more than what went in - albeit processed by fire - so a limited quantity must be shared by the entire community. This usually leads either to systems of private property and explicit barter exchanges, or to the much analysed *Tragedy of the Commons*.²²

The Internet cooking-pots (in the plural, as it turns out, an examination of which is beyond the scope of this paper) are quite different, naturally. They take in whatever is produced, and give out their entire contents to whoever wants to consume. The digital cooking-pot is obviously a vast cloning machine, dishing out not single morsels but clones of the entire pot. But seen one at a time, every potful of clones is valuable to the consumer as the original products that went in.

The key here is the value placed on diversity²³, so that multiple copies of a single product add little value - marginal utility is near zero - but single copies of multiple products are, to a single user, of immense value. If a sufficient number of people put in free goods, the cooking pot clones them for everyone, so that everyone gets far more value than was put in.

An explicit monetary transaction - a sale of a software product - is based on what is increasingly an economic fallacy that each single copy of a product has marginal value. In contrast, the cooking-pot market rightly allocates resources on the basis of where consumers see value to be, in each distinct product.

A calculus of reputation

A crucial component of the cooking-pot market model is reputation, the counterpoint to ideas. Just as money does not make an economy without concrete goods and services, reputation or attention cannot make an economy²⁴ without valuable goods and services, which I have called 'ideas', being produced, consumed and traded.

Like money, reputation is a currency, i.e. a proxy, which greases the wheels of the economy. Monetary currency allows producers to sell to any consumer, without waiting for the right one to offer a needed product in barter exchange. Reputation encourages producers to seed the cooking-pot by providing immediate gratification to those who aren't prepared to pull things out of the pot just yet, or find nothing of great interest there, and keeps the fire lit.

Money also provides an index of value that aids an understanding not just of individual goods (or their producers), but the entire economy. Reputation, similarly, is a measure of the value placed upon certain producer-consumers - and their products - by others. The flow and interaction of reputation is a measure of the health of the entire cooking-pot economy.

Unlike money, reputation is not fixed, nor does it come in the form of single numerical values. It may not even be cardinal. Moreover, while a monetary value in the form of price is the result of matching demand and supply over time, reputation is more hazy. In the common English sense, it is equivalent to price, having come about through the combination of multiple personal attestations (the equivalent of single money transactions).

Money wouldn't be the same without technology to determine prices. Insufficient flow of information required for evaluation, and insufficient technology to cope with the information, has always been responsible for the fact that the same thing often have the same price across all markets.

The management of reputation is far too inefficient today to be a useful aspect of a working economy. Its semantics are poorly understood; moreover, there is nothing remotely akin to the technology that determines prices based on individual transactions in the monetary economy.

In a forthcoming paper I examine the calculus of reputation networks, especially as they would work in a cooking-pot market, and describe a possible technological solution to the problem of efficient reputation management.

Conclusion

The common assumption that the Net feels at home with free goods and vague trade because its population is averse to money, altruistic or slightly demented is wrong. It is becoming more obviously so as floods of 'normal' people arrive from the world outside, and initiate themselves into the ways of the Net.

An economic model based on rational self-interest and the maximisation of utility requires the identification of what is useful - sources of value - as well as a method of expressing economic interaction. In the cooking-pot market model, it is seen that while scarcity creates value, but value is subjective, and may therefore be found in any information at all distributed on the Net.

The cooking-pot model provides a rational explanation for people's motivations to produce and trade in goods and services, where a monetary incentive is lacking. It suggests that people do not only - or even largely - produce in order to improve their reputation, but as a more-than-fair payment for other goods - 'ideas' - that they receive from the cooking-pot. The cooking-pot market is not barter, as it does not require individual transactions. It is based on the assumption that on the Net, you don't lose when you duplicate, so every contributor gets much more than a fair return in the form of combined contributions of others.

Reputations, unlike ideas, have no inherent value; like money, they represent things of value, as proxies. Reputations are crucial to seed the cooking-pot and keep the fire lit, just as money is required to reduce the inefficiencies of pure barter markets. However, reputations require a calculus and technology for efficient working, just as money has its price-setting mechanisms today.

The cooking-pot model shows the possibility of immense value being generated through the continuous interaction of people at a numbing speed, with an unprecedented flexibility and aptitude towards intangible, ambiguously defined goods and services. The cooking-pot market already exists, it is an image of what the Internet has already evolved into, calmly and almost surreptitiously, over the past couple of decades.

The cooking-pot model is perhaps one way to find a rationale for the workings of the Internet - and on the Net, it finds expression everywhere.

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To: "Jeebesh Bagchi" <jeebesh@sarai.net>

From: "Pankaj Kaushal" [mailto:pankaj@fig.org] Web Administrator, 19 yrs.

From: "Supreet Sethi" [mailto:supreet@fig.org] System Administrator, 20 yrs.

Sub: On hacking, free software, etc.

> What would you mean by the term 'hacking'?

~ **PK:** Hacking to me and to all hackers is just stuff that one should do. Most people call it the 'feature creature', and that all hackers are slaves of the 'creepy feature creature', which stands behind the shoulder of every hacker, poking him in the back and urging "MORE features!", you need "MORE" you wanna learn "MORE", you need MORE features in this application, you need to make this app BETTER. No matter what the definition of better be. And one who responds to the 'creepy feature creature' is a hacker.

~ **SS:** Hacking would be a term used for any thing that lets a particular object perform better from a user's point of view. Better could be in terms of faster (speed, efficiency) or become more flexible to that users taste.

> What was your first hack?

~ **PK:** Well I don't know if it can be called one, but for me it was one. The fact is that "Need" makes you hack, Need is the creator of everything. I needed 2 do it so I did it. I had a game named Donkey which was written in Basic. The objective was to help the donkey cross the road and not be hit by a car. The game was a little fast because it was written for an XT and I was playing it on a new PC, a 286. So I hacked the source for a week, understood some of it. First I changed the colours (well I had a B&W screen, but there were shades of grey and white!) Later, I understood most of the code and was successful in changing the speed of the cars.

~ **SS:** My first hack would indisputably be the use of Windows 3.1 winword macros to print 'asdf;lkj', and then transferring this to WordStar to show to my dad!

~ **PK:** I improved my alarm clock once not to ring out the alarm, and I also wrote a minimum ping pong game on my PB300. This contained some of my first original code. It started like this. A lab I used to visit was headed by a stupid teacher who banned all games, the most famous being a 2d game called Dave, and another fighter game called Twin bees. So I wrote a minimal fighter game. It had "_H_" as a character, and this character was the fighter, and you had to take it through various tunnels. I wrote it in Basic, and we used to play it a lot. Me and my friends enhanced it, but the "Fire" instruction took so long to fix properly that we soon found a new way to get games into the lab.!

It looked something like this.

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|  =====|
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|==  _H_  =====|
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➤ *What do you mean by the word 'free' in 'free software'?*

~ **PK:** Its what you interpret it to be. For me the free part is not the software but the information that comes with it. By using GNU/Linux I have learned so much, but still its so little that I know. Free software gives me the freedom to copy, share, and modify, and to help my friends. Software that is not free i.e. proprietary is like a dozen apples that only "you" can eat i.e. you cannot enjoy the apples you bought with 5 of your friends.

~ **SS:** Freedom, *mukt*. Initially free software was more for *phun* because I didn't ever have to depend on Nehru Place for software which I needed. Till now I have only bought 2 CDs of pirated software. I think I bought them in 1997. The first time the question of 'free' came into my mind was when I saw the Debian site and then the Gnu site. There are great articles on the 'free' concept at www.gnu.org.

➤ *When did you start insisting on this term, as opposed to open-source and why?*

~ **PK:** Being open-source is just one part of free software and it's not me who started using the term open source, its people who are not making free software who began using the term 'open-source' just to be different. Why? Beats me! I started using the term free software as soon as I knew what it meant and what was the difference between the two. Why I use the term 'free software' is because the only way to refer to an apple is by calling it an "apple", and not a "monkey". That's why!

~ **SS:** I was well into domain of the free when this 'open source' term came up and Netscape launched its browser. It was controversial from the start.

➤ *Why is there resistance to the usage of the term 'free software' in the Linux community?*

~ **PK:** I think the Linux community is fast becoming users' community, not a developers' community. Anyone who steps in or wants to step into developer mode, and who joins the hacker community, knows the reasons why he who or she is there, and learns the reasons why it is called free software, and why it should be so. On the other hand, users and commercial people who are interested in Linux just because it's happening don't know the meaning of free software or what GNU is all about and what free software really is. The Linux community is full of novices.

~ **SS:** I think the community fears that they will die if big guys like IBM, SGI etc. don't support them. IBM and other such empires tend to like the term 'open source'. So free software guys come on to the wrong side of the fence.

➤ *What is the developmental model followed by the free software community?*

~ **PK:** Well in simple terms, the model is that if you need anything or you think someone needs something, try to find out if anyone else is already working on it. If yes, join the mailing list and try to contribute to the software. If not, or if the project has different goals than the ones you have in mind, you start a project, get a web page/ftp location for it, set up a mailing list and try to code. If it's good, then developers/beta testers/users will join in.

~ **SS:** The development model is plain and simple. The software should be easy to program and easy to use. The Unix model. Then mailing lists need to be made for users and developers, and a community is built around the program. Additions/Changes are made accord-

ing to problems pointed out by people using the software.

- *Why do you think a vibrant free-software community is yet to emerge in our society?*
- ~ **PK:** Well, I think computing in India, let alone free-s/w, is in its infancy and a large number of people who relate themselves to the computing industry are trying to make a fast buck. 'Minimum Input Maximum Output' and free-s/w fits there very well, so everyone is using it but very few are trying to contribute to it. There is a lack of knowledge for what free-s/w actually stands for, and it's very hard to tell people who are brainwashed by the media image of computers about ethics.
- ~ **SS:** I think India would be the best testing ground for free software because the pirate economy concept is already wide spread. What is most important is that young and intelligent minds engage with this social imagination.

- *What do you think needs to change in the public domain at large for there to be a active understanding of free s/w?*
- PK:** Actually, I believe that hackers are not reaching the public at all. The most important thing is the image that the media displays of hackers and their work. The Media are controlled by big media empires, which are connected to big s/w empires and are therefore brainwashing the public. The public at large is not worried about whether they are using proprietary s/w or free, or if they are pirating it. Frankly, they need not be bothered, but at least they should know that there exists an alternative to proprietary s/w.
- SS:** I think common people think that all this is part of social talk that arty people indulge in!!
- ~
- *Is there a shortcoming in the community of software developers in our society that stops them from becoming a part of the free s/w community?*
- ~ **PK:** No. Any one who is a programmer will be a hacker at heart, and would like to share and learn more. It's not software developers who are worried about free-s/w - they all love it. It's the managers, the CEOs who are afraid of it. These are the guys who don't understand it.
- ~ **SS:** Yes there is. Because there is no money in many careers, people are running to work in software without any real interest in doing it. It's a lucrative career option. People see money abundance in software, which there is in software development. Actually, its not abundance in software, its only a lack of it in other career streams.

- *What is your present project, and what is the developmental model you are following?*
- ~ **PK:** At present I'm active in the GNU/Hurd mailing list, and am working my way to hacking the Hurd and producing something neat. GNU/India and net4rural are the projects I'm working on, as also trying to get as much free-s/w into Sarai as possible.
- ~ **SS:** Trying to solve all the crazy network and application problems that are emerging at Sarai! But soon, in the very near future, I would like to plan for a very low-cost net connectivity solution. It is a must, if the Net has to expand in India.

Fire, Work With Me

L. FITZGERALD SJÖBERG

As most of you are aware, congress has recently passed as law to allow copyright to be applied to individual works of fire, both in terms of actual fires and in terms of manufactured oxidation potential like matches and lighters.

I, for one, am glad to see justice finally served. I mean, think about it. You go through all the work to create a fire, and someone comes up to your fire and pokes a stick in it. They can then walk away, having stolen your fire, and use it for anything. Say they use it to light the ore smelter at a metals processing plant. They'd be making millions off your fire without having to give you a DIME!

Unauthorized fire transfer is exactly like walking into the original firestarter's home, stealing their VCR, TV, and all their tapes of *Earth 2*, then sexually violating their household pets on the way out. It's exactly the same, and should be prosecuted as such.

There are a few drawbacks, of course. To begin with, you can't buy matches anymore; you'll license them. And of course most licenses will forbid you to give anyone else a light without first extinguishing anything you lit with the same book of matches. But isn't that worth it to protect the rights of the original firemakers?

Well, the employers of the original firemakers, actually. Most ignition is done on a 'Fire for Hire' basis, meaning that the company that commissioned the firemaker gets the copyright. But still.

Now, the real problem is that of enforcement. Given all the fire out there, it's going to be nearly impossible for holders of fire copyright to track down the billions of dollars worth of pirated fire stolen every year. Lots of companies are working on developing fire that will only work with their proprietary ignition materials, but you and I both know that those ruthless fire pirates will find a way around any protections. Already they're starting to whine about how 'conflagration wants to be free'. Godless socialists.

The only answer, of course, is the force of law. That's why I encourage you all to write to your representatives, encouraging them to pass strict legislation outlawing the possession of any unlicensed flammable materials. The only way to stop the immoral hordes of fire pirates is to keep the tools of their brutal trade – paper, wood, charcoal briquettes – out of their hands. Only then can we ensure a warm and well-lit future.





Copyrighting fire!

IAN CLARKE

I was in the pub last night, and a guy asked me for a light for his cigarette. I suddenly realised that there was a demand here and money to be made, and so I agreed to light his cigarette for 10 pence, but I didn't actually give him a light, I sold him a license to burn his cigarette. My fire-license restricted him from giving the light to anybody else, after all, that fire was my property. He was drunk, and dismissing me as a loony, but accepted my fire (and by implication the licence which governed its use) anyway. Of course in a matter of minutes I noticed a friend of his asking him for a light and to my outrage he gave his cigarette to his friend and pirated my fire! I was furious, I started to make my way over to that side of the bar but to my added horror his friend then started to light other people's cigarettes left, right, and centre! Before long that whole side of the bar was enjoying MY fire without paying me anything. Enraged I went from person to person grabbing their cigarettes from their hands, throwing them to the ground, and stamping on them.

Strangely the door staff exhibited no respect for my property rights as they threw me out the door.





<Alt/ Option>

The Manifesto of January 3, 2000

BRUCE STERLING

In 1914, the lamps went out all over Europe. Life during the rest of the twentieth century was like crouching under a rock.

But human life is not required to be like the twentieth century. That wasn't fate; it was merely a historical circumstance. In this new *Belle Epoque*, this delightful era, we are experiencing a prolonged break in the last century's even tenor of mayhem. The time has come to step out of those shadows into a different cultural reality.

We need a sense of revived possibility, of genuine creative potential, of unfeigned *joie de vivre*. We have a new economy, but we have no new intelligentsia. We have massive flows of information and capital, but we have a grave scarcity of meaning. We know what we can buy, but we don't know what we want.

The twentieth century featured any number of -isms. They were fatally based on the delusion that philosophy trumps engineering. It doesn't. In a world fully competent to command its material basis, ideology is inherently flimsy. 'Technology' in its broad sense: the ability to transform resources, the speed at which new possibilities can be opened and exploited, the multiple and various forms of command-and-control - technology, not ideology, is the twentieth century's lasting legacy. Technology broke the gridlock of the five-decade Cold War. It made a new era thinkable. And, finally, technology made a new era obvious.

But too many twentieth-century technologies are very like twentieth-century ideologies: rigid, monolithic, poisonous and non-sustainable.

We need clean, supple, healthy means of support for a crowded world. We need recyclable technologies, industries that don't take themselves with that Stalinesque seriousness that demands the brutal sacrifice of millions. In order to make flimsy, supple technologies thinkable, and then achievable, then finally obvious, we need an ideology that embraces its own obsolescence.

The immediate future won't be a period suitable for building monuments, establishing thousand-year regimes, creating new-model citizens, or asserting leaden certainties about anything whatsoever. The immediate future is about picking and choosing between previously unforeseen technical potentials.

Our time calls for intelligent fads. Our time calls for a self-aware, highly temporary array of broad social experiments, whose effects are localized, non-lethal and reversible - yet transparent, and visible to all parties who might be persuaded to look.

The Internet is the natural test-bed for this fast-moving, fast-vanishing, start-up society. Because the native technology of the coming years is not the 19th century 'machine' or the 20th century 'product.' It is the 21st century 'gizmo'.

A gizmo is a device with so many features and so many promises that it can never be mastered within its own useful lifetime. A gizmo is flimsy, cheap, colourful, friendly, intrigu-

ing, easily disposable, and unlikely to harm the user. The gizmo's purpose is not to efficiently perform some function or effectively provide some service. A gizmo exists to snag the user's attention, and to engage the user in a vast unfolding nexus of interlinked experience.

The gizmo in its manifold aspects is the beau ideal for contemporary design and engineering. Because that is what our culture will be like, at its heart, in its bones, in its organs. A gizmo culture. We will go in so many directions at once that most of them will never see fulfilment. And then they will be gone.

This is confusing and seems lacking in moral seriousness - but only by the rigid standards of the past century, bitterly obsessed with ultimate efficiencies and malignant final solutions. We need opportunities now, not efficiencies. We need inspired improvisation, not solutions. Technology can no longer bind us in a vast tonnage of iron, barbed wire and brick. We will stop heaving balky machines uphill. Instead, we begin judging entire techno-complexes as they virtually unfold, judging them by standards that are, in some very basic sense, aesthetic.

Henceforth, it is humans and human flesh that lasts out the years, not the mechanical infrastructure. Our bodies outlast our machines, and our bodies outlast our beliefs. People will outlive this 'revolution' - if spared an apocalypse, human individuals will outlive every 'technology' that we are capable of deploying. Waves of techno-change will come faster and faster, and with less and less permanent consequence. Waves will be arriving with the somnolent regularity of Waikiki breakers. This 'revolution' does not replace one social order with another. It replaces social order with an array of further possible transformations.

Since gizmos are easily outmoded and inherently impermanent, their most graceful form is as disposable consumer technology. We should embrace those gizmos that are pleasing, abject, humble, and closest to the human body. We should spurn those that are remote, difficult, threatening, poisonous and brittle.

Most of all, we must never, ever again feel awestruck wonder about any manufactured device. They don't last, and are not worthy of that form of respect.

We must engage with technology in a new way, from a fresh perspective. The arts traditionally hold this critical position. The arts are in a position today to inspire a burst of cultural vitality across the board. The times are very propitious for the arts. There's a profound restlessness, there's money loose, there are new means of display and communication, and the nouveau riche have nothing to wear and nothing that suits their walls. It's a golden opportunity for techno-dandyism. Artists, don't be afraid of commercialisation. The sovereign remedy for commercialisation is not for artists to hide from commerce. That can't be done any more, and in any case, hiding never wins and strong artists don't live in fear.

Instead, we have a new remedy available. The aggressive counter-action to commodity totalitarianism is to give things away. Not other people's property - that would be, sad to say, 'piracy' - but the products of your own imagination, your own creative effort.

This is the time to be thoughtful, be expressive, be generous. Be 'taken advantage of'. The channels exist now to give creativity away, at no cost, to millions. Never mind if you make large sums of money along the way. If you successfully seize attention, nothing is more likely. In a start-up society, huge sums can fall on innocent parties, almost by accident. That cannot be helped, so don't worry about it any more. Henceforth, artistic

integrity should be judged, not by one's classic bohemian seclusion from satanic mills and the grasping bourgeoisie, but by what one creates and gives away. That is the only scale of non-commercial integrity that makes any sense now.

Freedom has to be won, and, more importantly, the consequences of freedom have to be lived. You do not win freedom of information by filching data from a corporate warehouse, or begging the authorities to kindly abandon their monopolies, copyrights and patents. You have to create that freedom by a deliberate act of will, think it up, assemble it, sacrifice for it, make it free to others who have a similar will to live that freedom.

Ivory towers are no longer in order. We need ivory networks. Today, sitting quietly and thinking is the world's greatest generator of wealth and prosperity. Moguls spend their lives sitting in chairs, staring into screens, and occasionally clicking a mouse. Though we didn't expect it, we're all on the same net. We no longer need feudal shelters to protect us from the swords and torches of barbarian ignorance. So show them words and images: make it obvious, let them look. If they're interested, fine; if not, go pick another website.

The structure of human intellectual achievement should be reformatted, so that any human being with a sincere interest can learn as much as possible, as rapidly as their abilities allow. The Internet is the greatest accomplishment of the twentieth century's scientific community, and the Internet has made a new intelligentsia possible.

Like the scientific method, the Internet is a genuine, workable, verifiable means of intellectual liberation. Don't worry if it's not universal. Awareness can't be doled out like soup, or sold like soap. Intellectual vitality is an inherently internal, self-actualising process. The net must make this possible for people, not by blasting flags and gospel at the masses, but by opening doors for individual minds, who will then pursue their own interests.

This can be made to happen. It is quite near to us now, the trends favour it. The consequences of genuine intellectual freedom are literally and rightfully unimaginable. But the unimaginable is the right thing to do. The unimaginable is far better than perfection, because perfection can never be achieved, and it would kill us if it were. Whereas the 'unimaginable' is, at its root, merely a healthy measure of our own limitations.

Human beings are imperfect and imperfectable, and their networks even more so. We should probably be happy for the noise and disruption in the channel, since so much of what we think we know, and love to teach, are mistakes and lies. But nevertheless, we can achieve progress here. We can remove some modicum of the fatal, choking constraints that throughout centuries have bent people double.

A human mind in pursuit of self-actualisation should be allowed to go as far and as fast as our means allow. There is nothing utopian about this program; because there is no timeless justice or perfect stability to be found in this vision. This practice will not lead us toward any dream, any City on a Hill, any phoney form of static bliss. On the contrary, it will lead us into closer and closer, into more and more immediate contact, with the issues that really bedevil us.

Before many more decades pass, the human race will begin to obtain what it really wants. Then we will find ourselves confronted, in our bedrooms, streets, and breakfast tables, with real-world avatars of those Faustian visions of power and ability that have previously existed only in myth. Our aspirations will become consequences. That's when our

real trouble starts.

However, that is not a contemporary problem. The problems we face today are not those sombre, long-term problems. On the contrary, we very clearly exist in a highly fortunate time with very minor problems.

The so-called human condition won't survive the next hundred years. That fate is written on the forehead of the 21st century in letters of fire. That fate can be wisely shaped, or somewhat postponed, or brutally annihilated, but it cannot be denied. It is coming because we want it. It's not an alien imposition; it is borne from the inchoate depths of our own desires. But we're not beyond the limits of humanity, suffering that, exulting in that. We're just going there, visibly moving closer to it. Once we get there, we'll find no rest there. The appetite of divine discontent always grows by the feeding.

This dire knowledge makes today's scene seem quite playful and delightful by faux-retrospect. Our worst problems, which may seem so large, diffuse, and morbid, are mere teenage angst compared to the conundrums we're busily preparing for some other generation. Sober assessment of the contemporary scene makes it crystal-clear that a carnival atmosphere is in order. We exist in a highly disposable civilization that is hell-bent on outmoding itself. The pace of change is melting former physical restraints into a maelstrom of reformattable virtualities. That's here, it's real, it is truly our situation. We should live as if we know this is true. This is where our own sincerity and authenticity are to be found: in the strong conviction that the contemporary is temporary.

We need to live in these conditions in good faith. We need to re-imagine life and make the new implications clear. It's a murky situation, but we must not flinch from it; we must drench all of it in light. Because this is our home. We have no other. Our children live here. The mushroom clouds of the twentieth century have parted. We find ourselves on a beach, with wave after frothy wave of transformation. We have means, motive, and opportunity. Spread the light.

Henceforth, it will make more and more sense to base our deepest convictions around a hands-on confrontation with the consequences of technology. That's where the action is. On January 3, 2000, that's what it's about. The deepest resources of human creativity have a vital role there. It's where inspiration is most needed; it's the place to make a difference. Come out. Stand up. Shine.

Turn the lamps on all over the world.

The Net and The Web

HAKIM BEY

Pirate Utopias

The sea-rovers and corsairs of the 18th century created an 'information network' that spanned the globe: primitive and devoted primarily to grim business, the net nevertheless functioned admirably. Scattered throughout the net were islands, remote hideouts where ships could be watered and provisioned, booty traded for luxuries and necessities. Some of these islands supported 'intentional communities', whole mini-societies living consciously outside the law and determined to keep it up, even if only for a short but merry life.

Some years ago I looked through a lot of secondary material on piracy hoping to find a study of these enclaves - but it appeared as if no historian has yet found them worthy of analysis. (William Burroughs has mentioned the subject, as did the late British anarchist Larry Law - but no systematic research has been carried out.) I retreated to primary sources and constructed my own theory, some aspects of which will be discussed in this essay. I called the settlements 'Pirate Utopias'.

Recently Bruce Sterling, one of the leading exponents of Cyberpunk science fiction, published a near-future romance based on the assumption that the decay of political systems will lead to a decentralized proliferation of experiments in living: giant worker-owned corporations, independent enclaves devoted to 'data piracy', Green-Social-Democrat enclaves, Zerowork enclaves, anarchist liberated zones, etc. The information economy that supports this diversity is called the Net; the enclaves (and the book's title) are *Islands in the Net*.

The medieval Assassins founded a 'state' which consisted of a network of remote mountain valleys and castles, separated by thousands of miles, strategically invulnerable to invasion, connected by the information flow of secret agents, at war with all governments, and devoted only to knowledge. Modern technology, culminating in the spy satellite, makes this kind of autonomy a romantic dream. No more pirate islands! In the future the same technology - freed from all political control - could make possible an entire world of autonomous zones. But for now the concept remains precisely science fiction - pure speculation.

Are we who live in the present doomed never to experience autonomy, never to stand for one moment on a bit of land ruled only by freedom? Are we reduced either to nostalgia for the past or nostalgia for the future? Must we wait until the entire world is freed of political control before even one of us can claim to know freedom? Logic and emotion unite to condemn such a supposition. Reason demands that one cannot struggle for what one does not know; and the heart revolts at a universe so cruel as to visit such injustices on our generation alone of humankind.

To say that "I will not be free till all humans (or all sentient creatures) are free" is simply to cave in to a kind of nirvana-stupor, to abdicate our humanity, to define ourselves as losers.

I believe that by extrapolating from past and future stories about 'islands in the net' we

may collect evidence to suggest that a certain kind of 'free enclave' is not only possible in our time but also existent. All my research and speculation has crystallized around the concept of the TEMPORARY AUTONOMOUS ZONE (hereafter abbreviated TAZ). Despite its synthesizing force for my own thinking, however, I don't intend the TAZ to be taken as more than an essay ('attempt'), a suggestion, almost a poetic fancy. Despite the occasional Ranter-ish enthusiasm of my language I am not trying to construct political dogma. In fact I have deliberately refrained from defining the TAZ - I circle around the subject, firing off exploratory beams. In the end the TAZ is almost self-explanatory. If the phrase became current it would be understood without difficulty...understood in action.

The Net and the Web

We've spoken of the Net, which can be defined as the totality of all information and communication transfer. Some of these transfers are privileged and limited to various elites, which gives the Net a hierarchic aspect. Other transactions are open to all—so the Net has a horizontal or non-hierarchic aspect as well. Military and Intelligence data are restricted, as are banking and currency information and the like. But for the most part the telephone, the postal system, public data banks, etc. are accessible to everyone and anyone. Thus within the Net there has begun to emerge a shadowy sort of counter-Net, which we will call the Web (as if the Net were a fishing-net and the Web were spider-webs woven through the interstices and broken sections of the Net). Generally we'll use the term Web to refer to the alternate horizontal open structure of info-exchange, the non-hierarchic network, and reserve the term counter-Net to indicate clandestine illegal and rebellious use of the Web, including actual data-piracy and other forms of leeching off the Net itself. Net, Web, and counter-Net are all parts of the same whole pattern-complex—they blur into each other at innumerable points. The terms are not meant to define areas but to suggest tendencies.

(Digression: Before you condemn the Web or counter-Net for its 'parasitism', which can never be a truly revolutionary force, ask yourself what 'production' consists of in the Age of Simulation. What is the 'productive class'? Perhaps you'll be forced to admit that these terms seem to have lost their meaning. In any case the answers to such questions are so complex that the TAZ tends to ignore them altogether and simply picks up what it can use. 'Culture is our Nature' - and we are the thieving magpies, or the hunter/gatherers of the world of CommTech.)

The present forms of the unofficial Web are, one must suppose, still rather primitive: the marginal zine network, the BBS networks, pirated software, hacking, phone-phreaking, some influence in print and radio, almost none in the other big media - no TV stations, no satellites, no fibre-optics, no cable, etc., etc. However the Net itself presents a pattern of changing/evolving relations between subjects ('users') and objects ('data'). The nature of these relations has been exhaustively explored, from McLuhan to Virilio. It would take pages and pages to 'prove' what by now 'everyone knows'. Rather than rehash it all, I am interested in asking how these evolving relations suggest modes of implementation for the TAZ.

The TAZ has a temporary but actual location in time and a temporary but actual location in space. But clearly it must also have 'location' in the Web, and this location is of a different sort, not actual but virtual, not immediate but instantaneous. The Web not only pro-

vides logistical support for the TAZ, it also helps to bring it into being; crudely speaking one might say that the TAZ 'exists' in information-space as well as in the 'real world'. The Web can compact a great deal of time, as data, into an infinitesimal 'space'. We have noted that the TAZ, because it is temporary, must necessarily lack some of the advantages of a freedom which experiences duration and a more-or-less fixed locale. But the Web can provide a kind of substitute for some of this duration and locale - it can inform the TAZ, from its inception, with vast amounts of compacted time and space which have been 'subtilized' as data.

At this moment in the evolution of the Web, and considering our demands for the 'face-to-face' and the sensual, we must consider the Web primarily as a support system, capable of carrying information from one TAZ to another, of defending the TAZ, rendering it 'invisible' or giving it teeth, as the situation might demand. But more than that: If the TAZ is a nomad camp, then the Web helps provide the epics, songs, genealogies and legends of the tribe; it provides the secret caravan routes and raiding trails which make up the flow lines of tribal economy; it even contains some of the very roads they will follow, some of the very dreams they will experience as signs and portents.

The Web does not depend for its existence on any computer technology. Word-of-mouth, mail, the marginal zine network, 'phone trees', and the like, already suffice to construct an information webwork. The key is not the brand or level of tech involved, but the openness and horizontality of the structure. Nevertheless, the whole concept of the Net implies the use of computers. In the SciFi imagination the Net is headed for the condition of Cyberspace (as in *Tron* or *Neuromancer*) and the pseudo-telepathy of 'virtual reality'. As a Cyberpunk fan I can't help but envision 'reality hacking' playing a major role in the creation of TAZs. Like Gibson and Sterling I am assuming that the official Net will never succeed in shutting down the Web or the counter-Net, that data-piracy, unauthorized transmissions and the free flow of information can never be frozen. (In fact, as I understand it, chaos theory predicts that any universal Control-system is impossible.)

However, leaving aside all mere speculation about the future, we must face a very serious question about the Web and the tech it involves. The TAZ desires above all to avoid mediation, to experience its existence as immediate. The very essence of the affair is 'breast-to-breast' as the Sufis say, or face-to-face. But, BUT: the very essence of the Web is mediation. Machines here are our ambassadors - the flesh is irrelevant except as a terminal, with all the sinister connotations of the term.

The TAZ may perhaps best find its own space by wrapping its head around two seemingly contradictory attitudes toward Hi-Tech and its apotheosis the Net: (1) what we might call the Fifth Estate/ Neo-Paleolithic Post-Situ Ultra-Green position, which construes itself as a Luddite argument against mediation and against the Net; and (2) the Cyberpunk utopians, futuro-libertarians, Reality Hackers and their allies who see the Net as a step forward in evolution, and who assume that any possible ill effects of mediation can be overcome—at least, once we've liberated the means of production.

The TAZ agrees with the hackers because it wants to come into being - in part - through the Net, even through the mediation of the Net. But it also agrees with the greens because it retains intense awareness of itself as body and feels only revulsion for CyberGnosis, the attempt to transcend the body through instantaneity and simulation. The TAZ tends to view

the Tech/anti-Tech dichotomy as misleading, like most dichotomies, in which apparent opposites turn out to be falsifications or even hallucinations caused by semantics. This is a way of saying that the TAZ wants to live in this world, not in the idea of another world, some visionary world born of false unification (all green OR all metal) which can only be more pie in the sky by-&-by (or as Alice put it, "I am yesterday or jam tomorrow, but never jam today").

The TAZ is 'utopian' in the sense that it envisions an intensification of everyday life, or as the Surrealists might have said, life's penetration by the Marvellous. But it cannot be utopian in the actual meaning of the word, nowhere, or NoPlace Place. The TAZ is somewhere. It lies at the intersection of many forces, like some pagan power-spot at the junction of mysterious ley-lines, visible to the adept in seemingly unrelated bits of terrain, landscape, flows of air, water, animals. But now the lines are not all etched in time and space. Some of them exist only 'within' the Web, even though they also intersect with real times and places. Perhaps some of the lines are 'non-ordinary' in the sense that no convention for quantifying them exists. These lines might better be studied in the light of chaos science than of sociology, statistics, economics, etc. The patterns of force which bring the TAZ into being have something in common with those chaotic 'Strange Attractors' which exist, so to speak, between the dimensions.

The TAZ by its very nature seizes every available means to realize itself - it will come to life whether in a cave or an L-5 Space City - but above all it will live, now, or as soon as possible, in however suspect or ramshackle a form, spontaneously, without regard for ideology or even anti-ideology. It will use the computer because the computer exists, but it will also use powers which are so completely unrelated to alienation or simulation that they guarantee a certain psychic paleolithism to the TAZ, a primordial-shamanic spirit which will 'infect' even the Net itself (the true meaning of Cyberpunk as I read it). Because the TAZ is an intensification, a surplus, an excess, a potlatch, life spending itself in living rather than merely surviving (that snivelling shibboleth of the eighties), it cannot be defined either by Tech or anti-Tech. It contradicts itself like a true despiser of hobgoblins, because it wills itself to be, at any cost in damage to 'perfection', to the immobility of the final.

In the Mandelbrot Set and its computer-graphic realization we watch - in a fractal universe - maps that are embedded and in fact hidden within maps within maps etc. to the limits of computational power. What is it for, this map, which in a sense bears a 1:1 relation with a fractal dimension? What can one do with it, other than admire its psychedelic elegance?

If we were to imagine an information map - a cartographic projection of the Net in its entirety - we would have to include in it the features of chaos, which have already begun to appear, for example, in the operations of complex parallel processing, telecommunications, transfers of electronic 'money', viruses, guerrilla hacking and so on.

Each of these 'areas' of chaos could be represented by topographs similar to the Mandelbrot Set, such that the 'peninsulas' are embedded or hidden within the map - such that they seem to 'disappear'. This 'writing' - parts of which vanish, parts of which efface themselves - represents the very process by which the Net is already compromised, incomplete to its own view, ultimately un-controllable. In other words, the M Set, or something like it, might prove to be useful in 'plotting' (in all senses of the word) the emergence of the counterNet as a chaotic process, a 'creative evolution' in Prigogine's term. If nothing else

the M Set serves as a metaphor for a 'mapping' of the TAZ's interface with the Net as a disappearance of information. Every 'catastrophe' in the Net is a node of power for the Web, the counter-Net. The Net will be damaged by chaos, while the Web may thrive on it.

Whether through simple data-piracy, or else by a more complex development of actual rapport with chaos, the Web-hacker, the cybernetician of the TAZ, will find ways to take advantage of perturbations, crashes, and breakdowns in the Net (ways to make information out of 'entropy'). As a *bricoleur*, a scavenger of information shards, smuggler, blackmailer, perhaps even cyberterrorist, the TAZ-hacker will work for the evolution of clandestine fractal connections. These connections, and the different information that flows among and between them, will form 'power outlets' for the coming-into-being of the TAZ itself - as if one were to steal electricity from the energy-monopoly to light an abandoned house for squatters.

Thus the Web, in order to produce situations conducive to the TAZ, will parasitise the Net - but we can also conceive of this strategy as an attempt to build toward the construction of an alternative and autonomous Net, 'free' and no longer parasitic, which will serve as the basis for a 'new society emerging from the shell of the old'. The counter-Net and the TAZ can be considered, practically speaking, as ends in themselves - but theoretically they can also be viewed as forms of struggle toward a different reality.

Having said this we must still admit to some qualms about computers, some still unanswered questions, especially about the Personal Computer.

The story of computer networks, BBSs and various other experiments in electro-democracy has so far been one of hobbyism for the most part. Many anarchists and libertarians have deep faith in the PC as a weapon of liberation and self-liberation - but no real gains to show, no palpable liberty.

I have little interest in some hypothetical emergent entrepreneurial class of self-employed data/word processors who will soon be able to carry on a vast cottage industry or piecemeal shitwork for various corporations and bureaucracies. Moreover it takes no ESP to foresee that this 'class' will develop its underclass - a sort of lumpen yuppeteriat: housewives, for example, who will provide their families with 'second incomes' by turning their own homes into electro-sweatshops, little Work-tyrannies where the 'boss' is a computer network.

Also I am not impressed by the sort of information and services proffered by contemporary 'radical' networks. Somewhere - one is told - there exists an 'information economy'. Maybe so; but the info being traded over the 'alternative' BBSs seems to consist entirely of chitchat and techie-talk. Is this an economy? Or merely a pastime for enthusiasts? OK, PCs have created yet another 'print revolution'; OK, marginal webworks are evolving; OK, I can now carry on six phone conversations at once. But what difference has this made in my ordinary life?

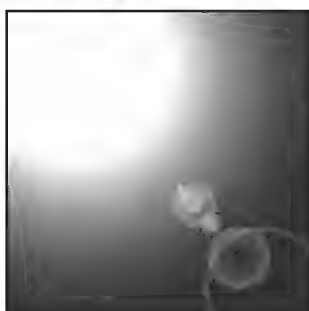
Frankly, I already had plenty of data to enrich my perceptions, what with books, movies, TV, theatre, telephones, the U.S. Postal Service, altered states of consciousness, and so on. Do I really need a PC in order to obtain yet more such data? You offer me secret information? Well...perhaps I'm tempted - but still I demand marvellous secrets, not just unlisted telephone numbers or the trivia of cops and politicians. Most of all I want computers to provide me with information linked to real goods - "the good things in life," as the

IWW Preamble puts it. And here, since I'm accusing the hackers and BBSers of irritating intellectual vagueness, I must myself descend from the baroque clouds of Theory & Critique and explain what I mean by 'real goods'.

Let's say that for both political and personal reasons I desire good food, better than I can obtain from Capitalism - unpolluted food still blessed with strong and natural flavours. To complicate the game, imagine that the food I crave is illegal - raw milk perhaps, or the exquisite Cuban fruit *mamey*, which cannot be imported fresh into the U.S. because its seed is hallucinogenic (or so I'm told). I am not a farmer. Let's pretend I'm an importer of rare perfumes and aphrodisiacs, and sharpen the play by assuming most of my stock is also illegal. Or maybe I only want to trade word processing services for organic turnips, but refuse to report the transaction to the IRS (as required by law, believe it or not). Or maybe I want to meet other humans for consensual but illegal acts of mutual pleasure (this has actually been tried, but all the hard-sex BBSs have been busted - and what use is an underground with lousy security?). In short, assume that I'm fed up with mere information, the ghost in the machine. According to you, computers should already be quite capable of facilitating my desires for food, drugs, sex, tax evasion. So what's the matter? Why isn't it happening?

The TAZ has occurred, is occurring, and will occur with or without the computer. But for the TAZ to reach its full potential it must become less a matter of spontaneous combustion and more a matter of 'islands in the Net'. The Net, or rather the counter-Net, assumes the promise of an integral aspect of the TAZ, an addition that will multiply its potential, a 'quantum jump' (odd how this expression has come to mean a big leap) in complexity and significance. The TAZ must now exist within a world of pure space, the world of the senses. Liminal, even evanescent, the TAZ must combine information and desire in order to fulfil its adventure (its 'happening'), in order to fill itself to the borders of its destiny, to saturate itself with its own becoming.

Perhaps the Neo-Paleolithic School are correct when they assert that all forms of alienation and mediation must be destroyed or abandoned before our goals can be realized - or perhaps true anarchy will be realized only in Outer Space, as some futuro-libertarians assert. But the TAZ does not concern itself very much with 'was' or 'will be'. The TAZ is interested in results, successful raids on consensus reality, breakthroughs into more intense and more abundant life. If the computer cannot be used in this project, then the computer will have to be overcome. My intuition however suggests that the counter-Net is already coming into being, perhaps already exists - but I cannot prove it. I've based the theory of the TAZ in large part on this intuition. Of course the Web also involves non-computerized networks of exchange such as samizdat, the black market, etc. - but the full potential of non-hierarchic information networking logically leads to the computer as the tool par excellence. Now I'm waiting for the hackers to prove I'm right, that my intuition is valid. Where are my turnips?



How Sarai Happened

Sarai began to take shape in the summer of 1998 in Delhi.

The summer of '98 was a time for many new beginnings in the city of Delhi. The nineties had been a decade marked by doubt and rethinking on many fronts, all of which seemed to have come to a head for some of us during that summer.

There was a sense of disquiet with increasing urban violence and strife, dissatisfaction with restrictive modes of thinking and practice within mainstream academia, the universities & the media and a general unease at the stagnation that underlay the absence of a critical public culture.

At the same time, Delhi witnessed a quiet rebirth of an independent arts and media scene. This became evident in exhibitions and screenings that began taking place modestly in alternative venues, outside galleries and institutional spaces, and in archival initiatives that began to be active. Spaces for dissent and debate were being kept alive by clusters of teachers and students in the universities. New ideas, modes of communication and forms of protest were being tried out and tested on the streets. There was a vibrant energy evident in street level improvisations with new technologies. Public phone booths were transforming themselves into street corner cyber cafés, independent filmmakers were beginning to organise themselves in forums and a new open source and free software community made its mark in the city's BBSs (Electronic Bulletin Boards). The city itself, as a space and as an idea, was becoming a focus for enquiry and reflection, and a provocation for a series of creative experiments.

It was from within this ferment of ideas, rough & ready plans, and fragments of proposals, that a series of conversations on film history, new media theory, media practice and urban culture was able to mature into the conceptual foundation of Sarai. Underlying these conversations was a desire to create a space which, like the sarais for which Delhi was once well known, would be a convivial place where people from many backgrounds could gather, converse and work together.

The challenge before the founding group was to cohere a philosophy that would marry this range of concerns to the vision of creating a lively public space where research, media practice and activism could flow into each other.

It took two years to translate this conception into a plan for a real space and a design of a workable interdisciplinary programme of activities. The Sarai Initiative embraces interests that include cinema history, urban cultures and politics, new media theory, computers, the Internet and software cultures, documentary filmmaking, digital arts and critical cultural practice.

Sarai has been founded on the basis of a collaborative vision and it will grow by continuing to include and engage with new people and ideas.

Initiators :

Ravi Vasudevan & Ravi Sundaram (Centre for the Study of Developing Societies)

Raqs Media Collective (Jeebesh Bagchi, Monica Narula & Shuddhabrata Sengupta)

Sarai, the New Media Initiative, a programme of the Centre for the Study of Developing Societies is an alternative, non-profit space for an imaginative reconstitution of urban public culture, new/old media practice and research and critical cultural intervention.

The framework of Sarai includes scholarly reflection and creative work on film & video, computers, telephony, print culture, radio, multimedia and the Internet.

AIMS & OBJECTIVES

To become an engaged and integral part of contemporary urban culture within the city of Delhi.

+

To foster interdisciplinary research on urban culture & politics and media history & practice.

+

To create contexts for collaboration between practitioners & scholars

+

To collaborate with non-elite and neighbourhood media practitioners with new skills through workshops and outreach programmes.

+

To demonstrate the validity of low-cost & low-tech methods and strategies in media and communication practices, with a commitment to public participation and access.

+

To promote non-proprietary (copyleft) and collaborative models of cultural practice/knowledge.

ACTIVITIES & INTERESTS

Media Research & Theory + Media Practice +
Media History + Free Software Development + Web Based
Practices + Multimedia & Digital Art + Workshops &
Seminars + Training + Lectures/Talks/ Presentation +
Advocacy & Education + Film/Video/Multimedia Screenings
+ Online Journal & Website + Publications

The Society for Old and New Media (SONM), De Waag, Amsterdam.
www.waag.org

The Society for Old and New Media is a cultural research and development centre for communications technology. Central to the Society's aims is the development of technological applications for the cultural and social expression of groups and individuals. Designers, software engineers, artists and scientists work together closely within the Society for Old and New Media, and for projects, collaboration is sought with partners in the social sector, the educational field and trade and industry.

The Society's projects are categorized into three different groups:

DESIGN & SOFTWARE

Designers in the Society for Old and New Media develop internet environments, interfaces and hybrid media applications like interactive television. The Society's designs always place central emphasis on the users.

ADVENTURES

The Society for Old and New Media organises so-called 'Adventures': training and workshops for policy makers, teachers, developers and advisors from diverse backgrounds.

PROGRAMME AND EVENTS

The Society arranges conferences, manifestations, debates, presentations and exhibitions. These are sometimes organised in co-operation with several other institutes and theatres.



Centre For The Study Of Developing Societies (CSDS), Delhi

The Centre for the Study of Developing Societies, founded in 1964, is one of India's best-known independent research institutes. Bringing together some of South Asia's best known thinkers and writers, the CSDS has played an important part in shaping the intellectual and creative map of this part of the world.

The Centre's current research programme has four main focuses:

- > democratic politics and its future;
- > politics of culture, including the new technologies of culture & communication;
- > politics of alternatives and human futures;
- > violence, ethnicity & diversity.

CONTRIBUTORS (in alphabetical order)

Aditya Nigam is a writer, political theorist and activist working on the politics of city space in Delhi. He is working on a Hindi e-zine at Sarai. aditya@sarai.net

Arun Mehta is a telecommunications engineer and Internet activist based in Delhi. He is president of the Society for Telecommunications Empowerment (STEM).
www.radiophony.com; indata@satyam.net.in

Ashish Mahajan is a media production manager and is presently taking care of operations at Sarai.
ashish@sarai.net

Awadhendra Sharan is a historian. He coordinates the 'CityLives: Urban Culture and Politics' Project at Sarai. sharan@sarai.net

Bruce Sterling is the author of science fiction novels such as *Holy Fire* and (with William Gibson) *The Difference Engine*. He has written extensively on hacking and cyberspace, including *The Hacker Crackdown*. www.rice.edu/projects/RDA/programs/VirtualCity/Sterling/; bruce@well.com

C.K. Lal is an engineer and freelance columnist with *Himal Khabarpatrika* and *Nepali Times*. He is associated with Martin Chautari - an independent discussion forum in Kathmandu, Nepal.

David Garcia is an artist and media activist. His work has focused on using different forms of media to give voice to marginalized concerns. He is an organizer of the Next Five Minutes Tactical Media Conferences in Amsterdam. davidg@xs4all.nl

Erik Kluitenberg is a writer, organizer and theorist who deals with the collision of new media technology, culture and society. He currently works with the political/cultural centre De Balie in Amsterdam.
epk@xs4all.nl

Florian Cramer is a writer, theorist, critic and programmer. He is coder of the combinatorial poetry site Permutations. <http://permutations.home.ml.org/>; <http://userpage.fu-berlin.de/~cantsin/>; cantsin@zedat.fu-berlin.de

Frederick Noronha is an independent journalist and Internet activist based in Goa. He writes for the India Abroad News Service (IANS) and for several other publications. Frederick, together with Partha Sarkar (Dhaka) initiated Bytes For All, an online newsletter about IT initiatives from South Asia and cybersolution. www.bytesforall.org; fred@bytesforall.org

Free Science Campaign is a public campaign for the freedom of distribution of scientific work.
<http://ethology.zool.su.se/freescience/>; freescience@zool.su.se

Free Software Foundation (FSF) is an online platform for the GNU (Gnu's not Unix) Project. FSF supports the freedoms of speech, press, and association on the Internet, the right to use encryption software for private communication, and the right to write software unimpeded by private monopolies.
www.fsf.org; gnu@gnu.org

Geert Lovink is a media theorist and activist, member of Adilkno, co-founder of Digital-City, desk.nl and contrast.org, and co-moderator of Nettime. Geert Lovink is co-ordinator of the Sarai-Waag Exchange Programme. www.nettime.org; <http://thing.desk.nl/bilwet>; geert@xs4all.nl

Hakim Bey is a religious historian, independent scholar and author of *Pirate Utopias: Moorish Corsairs, European Renegades*, and *The Temporary Autonomous Zone*, amongst other books. He is an editor with Autonomedia Books. www.t0.or.at/hakimbey/hakimbey.htm

Ian Clarke is the 23-year-old Irishman who, as a student at the University of Edinburgh in Scotland, developed Freenet, a piece of technology which, if it becomes as virally popular as the Napster and

Gnutella software applications, will revolutionize not only the Net but also the very concept of intellectual property. www.sanity.uklinux.net; I.Clarke@strs.co.uk.

Jaron Lanier is a computer scientist, composer, visual artist, and author. He coined the term 'Virtual Reality'. Currently, he is the Lead Scientist of the National Tele-immersion Initiative, a coalition of universities studying advanced applications for Internet 2. www.well.com/~jaron/; jaron@advanced.org

Jeebesh Bagchi is a filmmaker and media researcher with the Raqs Media Collective, and a co-initiator of Sarai. jeebesh@sarai.net

Julianne Pierce is member of the computer artists group VNS Matrix and the Cyberfeminist International, and a performer. Presently she is director of the Australian Network for Art & Technology (ANAT). <http://sysx.org.vns>; www.anat.org.au; julianne@anat.org.au

Lev Manovich is an artist, a theorist and a critic of new media. He is the author of *The Language of New Media*, and *Tekstura: Russian Essays on Visual Culture*. Manovich is also a regional editor for *rhizome.org*. www.manovich.net; manovich@ucsd.edu

Matthew Fuller is a writer, artist, theorist and critic on new media art based in London. He has worked with the group I/O/D and with Mongrel. <http://trace.ntu.ac.uk/frame/text/fullerbio.html>; matt@axia.demon.co.uk

Mongrel is mixed bunch of people, machines and intelligences, working to celebrate the methods of London street culture. Some mongrels pride themselves on their ability to program, engineer and build their own software, while others have dedicated themselves to working with people. The core members are Matsuko Yokokoji, Mervin Jarman, Richard Pierre-Davis and Harwood. www.mongrelx.org; core@mongrelx.org

Monica Narula is a filmmaker, cinematographer & photographer with the Raqs Media Collective, and a co-initiator of Sarai. monica@sarai.net

Mrityunjay Chatterjee is a graphic artist and web designer. Presently he is with the Media Lab at Sarai. www.naksiink.com; joy@sarai.net

Pankaj Kaushal is a free software activist, co-initiator of GNUIndia.org and webmaster at Sarai. pankaj@sarai.net

Pradip Saha is a photographer and designer. He is creative consultant to the Centre for Science & Environment, Delhi. prosaha@hotmail.com

Pratyoush Onta is an independent researcher, radio activist and founder member of Martin Chautari, Kathmandu, Nepal. Pratyoush is also a fellow of the Asia Fellowships Programme, researching academic resources on South Asian Societies. sinhas@mos.com.np

Raj Jayadev is a journalist and activist. He has been a Fellow of the Lafetra Fellows Program. He has worked with the Santa Clara Centre for Occupational Safety and Health, educating immigrant labourers about workplace safety. www.lafetra.org/fellows/1998/profiles.html; jayadev3@hotmail.com

Ram Samudrala has been post-doctoral fellow at Stanford University doing research in the area of computational genomics and proteomics. He is currently principal investigator (assistant professor) at the University of Washington in Seattle. Ram publishes music online under the name of TWISTED HELICES. www.ram.org; me@ram.org

Raqs Media Collective is a group of filmmakers, photographers, writers and researchers based in Delhi. Raqs has made several documentary films, including *In the Eye of the Fish*, *Present Imperfect*, *Future Tense*, and the *Growing Up* series. Raqs has also edited *Double Take: Looking at the Documentary*. www.raqscollective.net; raqs@vsnl.com

Ravi Sundaram is a new media theorist and fellow at the Centre for the Study of Developing Societies, Delhi and a co-initiator of Sarai. He has written extensively on new media and modernity in India. <http://www.nettime.org/nettime.w3archive/199611/msg00018.htm>
<http://www.expand.at/s/words/bazaar.html>; ravis@sarai.net

Ravi Vasudevan is a film historian and fellow at the Centre for the Study of Developing Societies, Delhi and a co-initiator of Sarai. He has written extensively on cinema history and has recently edited *Making Meaning In Indian Cinema*. raviv@sarai.net

Ravikant is a historian, writer and translator. He co-ordinates the 'Language and New Media' Project at Sarai. He is co-editor of *Translating Partition: An Anthology of Partition Literature*, (forthcoming). ravikant@sarai.net

Rehan Ansari is a playwright and journalist based in Lahore. He writes a regular column on Chowk.com. www.chowk.com; rehanhasanansari@yahoo.com

Richard Stallman is the founder of the GNU Project, launched in 1984 to develop the free operating system GNU (an acronym for "GNU's Not Unix"), and thereby give computer users the freedom that most of them have lost. www.stallman.org; rms@stallman.org

Rishabh Aiyer Ghosh is Managing Editor of First Monday, the peer-reviewed journal of the Internet published online from Copenhagen. He is with the e-Basics Research Unit at the International Institute of Infonomics, Maastricht University. www.firstmonday.dk; www.dxm.org; rishabh@dxm.org

Ruchika Agarwal has trained as a multimedia designer. She is presently with the Media Lab at Sarai. ruchika@sarai.net

Saskia Sassen is Professor of Sociology, University of Chicago, and Centennial Visiting Professor, London School of Economics. Her most recent books are *Guests and Aliens* and *Globalization and its Discontents*.
<http://social-sciences.uchicago.edu/sociology/sassen.html>; ssassen@uchicago.edu

Saumya Gupta is a historian, and the programmes and research co-ordinator at Sarai. sgupta@sarai.net

Seema Kazi is coordinator of Sisterhood Is Global Initiative's (SIGI) human rights education program in India. A member of the Women's Research Action Group, she has worked extensively with issues concerning Muslim women and inter-religious personal laws. skazi@nde.vsnl.net.in

Shahid Amin is currently head of the Department of History, Delhi University and a member of the Subaltern Studies Collective. He has written *Event, Metaphor, Memory - Chauri Chaura 1921*. www.lib.virginia.edu/area-studies/subaltern/ssh.htm; samin@del6.vsnl.net.in

Shuddhabrata Sengupta is a filmmaker and writer with the Raqs Media Collective and a co-initiator of Sarai. shuddha@sarai.net

L. Fitzgerald Sjoberg is a well-known Internet humorist and satirist. He is editor of *The Brunching Shuttlescocks*, an online humour magazine. www.brunching.com; lfitzgerald@brunching.com

Supreet Sethi is a free software activist, co-initiator of GNU-India.org and systems administrator at Sarai. supreet@sarai.net

Tomislav Longinovic is Associate Professor, Slavic Languages, University of Wisconsin-Madison; novelist, psychologist, and cultural scholar interested in the connection between media, war, and nationalism in the former Yugoslavia. <http://polyglot.lss.wisc.edu/mpi/members/longinovic.htm>; tlongino@facstaff.wisc.edu

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Almost all of the non-commissioned texts in the reader have been located and downloaded from the Public Domain of the Internet. Many amongst these were posted on Nettime. Almost all the 'Nettime' texts in this reader, with few exceptions, were published in Readme! The Nettime Reader, Autonomedia, New York, 1998. Every effort has been made to trace the authors and copyright holders of all texts, and obtain their consent for their re-publication. We do hope, in the instance of those authors whom we have not been able to communicate with, that they will not have any objection to the usage of their pieces, keeping in view the educational and non-commercial nature of this publication.

Following is a list of all the articles and other texts that have appeared elsewhere prior to their publication in this reader.

1. "FAQs on the Public Domain" is a version re-edited by Erik Kluitenberg for the Sarai Reader. The original version of this FAQ was drafted at the Society for Old and New Media (De Waag) in Amsterdam, April 1998, by Robert van Boeschoten, Eric Kluitenberg, Geert Lovink, Reinder Rustema and Marleen Stikker.
Source: http://www.waag.org/faq_publiekdomein2.0/
Re-edited by Eric Kluitenberg for the Sarai Reader, January 2001.
2. "The Topoi of E Space" by Saskia Sassen was presented first as a lecture at the DEAF 96 Symposium (Digital Territories), Rotterdam and posted on 'Nettime' on 28/10/1996.
3. "Post Colonial Towns Called Deoria" by Shahid Amin is a revised version of an essay originally published in *Seminar*, No. 432, August, 1995, Delhi.
4. "An Imperfect Public: Cinema and Citizenship in the 'third world'" by Ravi.S. Vasudevan is a revised version of the Van Zelst Lecture on Communication delivered at Northwestern University, Evanston, USA in 1998.
5. "On Mushtaq Gazdar's History of Pakistani Cinema" by Rehan Ansari is an expanded version of an article that was published originally in *Himal* magazine and then featured on Chowk.com. It is downloaded from the Chowk Website at: http://www.chowk.com/bin/showa.cgi?ansari_oct0798
6. "Who's Afraid of Radio in India?" is an edited version of an essay by the same name by Frederick Noronha, which was posted on 'Nettime' on 27/10/2000 (www.nettime.org).
7. "The 'Daily' Reality of Partition by" Saumya Gupta is an edited version of an essay to be published in *Translating Partition* edited by Ravikant and Tarun. K. Saint, Katha, New Delhi (forthcoming).
8. "ABC of Tactical Media" by Geert Lovink and David Garcia was written for the Next Five Minutes 3 Conference in Amsterdam (1999) and is downloaded from the Waag website at <http://www.waag.org/tmn/abc.html>
9. "Recycling Modernity" by Ravi Sundaram was first published in *Third Text*, Summer 1999 and posted on Nettime 16/09/1998 (www.nettime.org).
10. "New Media - A Users Guide" by Lev Manovich is downloaded from: www.manovich.net
11. "The Rise and Fall of Dotcommania - Cyberculture in the New Economy" by Geert Lovink is a revised version of "Cyberculture in the Age of Dotcom.mania: A Vista Over Internet Strategies" that was posted on 'Nettime', 15/04/2000 (www.nettime.org).
12. "Internet Nation - The Case of Cyber Yugoslavia" by Tomislav Longinovic was presented at "Portable Cultures: Old and New

- Media in the Contemporary' a workshop held at Sarai in January 2001 in collaboration with the University of Wisconsin-Madison.
13. "Interview with Mongrel" by Matthew Fuller was posted on 'Nettime' on 14/02/1999 (www.nettime.org).
 14. "Policing the Net: The Dangers of India's New IT Act" by Siddharth Varadarajan was published in *The Times of India* 18/05/2000. It is downloaded from: <http://www.timesofindia.com/180500/18edit4.htm>
 15. Seema Kazi's letter against VSNL Censorsip is downloaded from the *Hindu* Newspaper (11/11/2000) website www.the-hindu.com
 16. "Why Activists should take the Internet Seriously" by Arun Mehta was presented at a workshop on the Internet and Community Radio at Sarai, January 2001.
 17. "Touch: Wetware, Ubicom and Nanotech" by Julianne Pierce was published in *Touch Forum: an anthology of essays*. (Published by Nicholas Tsoutas for Artspace, Sydney 1996).
 18. "New Maps & Old Territories" by Monica Narula and Shuddhabrata Sengupta was first presented at the Cyberfeminist Strategies Panel at the Crossroads Conference on Cultural Studies, University of Birmingham, June 2000.
 19. "Next in Line - Indian Workers in Silicon Valley" by Raj Jayadev is downloaded from www.zmag.org/Bulletins/psawsv.htm
 20. "Bodyshopping Story - Account of an émigré Indian programmer in America" is downloaded from www.indnet.org/at/0004.html
 21. "Why Software should have no owners" by Richard Stallman is downloaded from the Gnu Website at www.gnu.org/philosophy/why-free.html
 22. "What is Copyleft?" is downloaded from the Gnu Website at: www.gnu.org/copyleft/copyleft.html
 23. "Some Confusing/Loaded Words & Phrases" is downloaded from the Gnu Website at www.gnu.org.
 24. "Piracy is Your Friend" by Jaron Lanier was first published in the New York Times of May 9, 1999, and was downloaded from the 'Zen Guitar Webzine' at: www.mauie.net/~zen_gtr/zgzineback.html
 25. "Interview with Stallman" (excerpts) by David Bennahum is downloaded from the MEME 2.04 site at <http://www.memex.org/meme2-04.html>
 26. "Hacker's Ethic" (originally written by Stephen Levy, in *Hackers: Heroes of the Computer Revolution*, 1984), downloaded from: <http://hoshi.cic.sfu.ca/~guay/Paradigm/Hacker.html>
 27. "Hackers Anti Defamation League" downloaded from: <http://members.nbci.com/jcenters/HADL.html>
 28. "Free Science Campaign" is downloaded from: <http://members.nbci.com/jcenters/HADL.html>
 29. "Free Music Philosophy" (v1.4) by Ram Samudrala, downloaded from: <http://www.ram.org/ramblings/philosophy/fmp.html>
 30. "Free Software as Collaborative Text" by Florian Cramer, downloaded from: http://userpage.fu-berlin.de/~cantsin/aufsaeetze/netzliteratu/free_software_as_text.html also posted on 'Nettime', 15/09/200, and 21/09/2000 (www.nettime.org).
 31. "Cooking Pot Markets: An Economic Model for the Free Trade in Goods and Services on The Internet", *First Monday*, Issue 3., 1998: http://www.firstmonday.dk/issues/issue3_3/ghosh/ and subsequently posted on Nettime, 03/08/1998 & 04/08/1998. Downloaded from 'Nettime'.
 32. "Fire, Work With Me by L. Fitzgerald Sjoberg" from the 'Brunching Shuttlecocks Web Zine', <http://www.brunching.com/features/feature-copyfire.html>
 33. "Copyrighting Fire" by Ian Clarke, downloaded from the GNU Website: <http://www.gnu.org/philosophy/fire.html>
 34. "The Manifesto of January 3, 2000" (Ideological Freeware - distribute at will) was posted on 03/01/2000 on Nettime (www.nettime.org).
 35. "The Net and the Web" is taken from T.A.Z. - *the Temporary Autonomous Zone*, by Hakim Bey, Published by Autonomedia Books, New York (1985, 199), downloaded from: <http://www.t0.or.at/hakimbey/taz/taz.htm> (the Hakim Bey/Zero News Datapool Site).

Quotes :

1. pg viii, from Richard Sennet - *The Fall of Public Man* (W.W. Norton, New York 1974)
2. pg 10, from Dipesh Chakrabarty - "Open Space/Public Space: Garbage, Modernity and India", *South Asia*, Vol XI, no.1 (1991)
3. pg 11, from Sudipta Kaviraj - "Filth & the Public Sphere", *Public Culture*, 10(1): (Fall, 1997)
4. pg 34, from Partha Chatterjee - "Community in The East", *Economic and Political Weekly*, February 7, 1998
5. pg 36, from Ashis Nandy - *An Ambiguous Journey to the City* (OUP, Delhi 2001)
6. pg 56, from Ravi Vasudevan (ed.) - *Making Meaning in Indian Cinema* (OUP, Delhi 2001)
7. pg 147, from Critical Art Ensemble, downloaded from www.critical-art.net

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